UNITED STATES DEPARTMENT OF COMMERCE
OFFICE OF TECHNICAL SERVICES

BIBLIOGRAPHY
OF SCIENTIFIC AND INDUSTRIAL REPORTS

Vol. 7 — November 7, 1947 — No. 6

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* Indicates that reports in the BIOS, CIOS and FIAT series are deposited in the Library of Congress Depository Libraries. For a complete list of these libraries, see page facing page 1, volume 5, of this Bibliography.

In addition to the indexes described on the back cover of this Bibliography, the Office of Technical Services has published the following reference works:

PB L 58101. SWIFT, GRACE. Government document series, analyzed by Office of Technical Services. Jan 1947. 46 p. Price: 25¢

PB L 78000. LOWRY, W. KENNETH. OSRD reports: Bibliography and index of declassified reports having OSRD numbers. Jun 1947. 106 p. Price: 75¢

PB L 79322. SWIFT, GRACE and CRNE, JERROLD. Subject headings for technical libraries. Jun 1947. 167 p. Price: $1.50

PB L 81803. U. S. OFFICE OF TECHNICAL SERVICES, TECHNICAL INDUSTRIAL INTELLIGENCE DIVISION. Reports resulting from the investigation of German technology, 1945-1946, and index of personnel. May 1947. 207 p. Price: $5.25

APPAREL

PB L 26653-R. U. S. AERONAUTICAL BOARD. Jacket: Leather flying. (Revision of PB 26653). (Army-Navy Aeronautical Standard Drawing AN 6552, rev.) May 1947. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 77396. WINSLOW, C. E. A. Radiation insulated flight clothing. Contract OEMsr-239, Progress reports 1-6, Nov 1, 1942 - Aug 1, 1943. Aug 1943. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00
The results of testing several types of radiation insulated flight clothing are given. Comparative tests on three differently designed suits showed that the most efficient suit consisted of a combination of double pile fabric and an impermeable coverall of continuous film reflective material (coefficient of reflectivity .90-.95). Other designs were being tested.

CHEMICALS AND ALLIED PRODUCTS

Drugs and Pharmaceuticals

PB L 78698. BERKMAN, SAM and others. Studies on streptomycin: I. Factors influencing the activity of streptomycin. n. d. 20 p. Price: Microfilm-$1.00 - Photostat-$2.00
Sodium chloride, potassium chloride, sodium sulfate, sodium tartrate, Soerensen's buffer, and ammonium acetate in physiological concentrations antagonize the activity of streptomycin against S. aureus, P. vulgaris, S. dysenteriae (Shiga), E. typhi, B. cereus, B. anthracis, and B. subtilis. The degree of antagonism was directly proportional to the salt concentration. The activity of streptomycin varied inversely with the size of initial inoculum. This effect is apparent rather than real and arises from the fact that, the larger the inoculum, the greater the number of resistant organisms present. Evidence is presented for the presence of a weak antagonist of streptomycin in the filtrates of cultures of S. aureus and P. vulgaris. This factor appears to be of little physiological importance since it was active only in acid pH. A table, several graphs, and a bibliography are included. From the Technical Laboratories, Camp Detrick, Frederick, Maryland.

PB L 79145. HENRY, RICHARD J. and others. Studies on streptomycin. II. Inactivation of streptomycin upon standing in certain culture media and human serum. n. d. 8 p. Price: Microfilm-$1.00 - Photostat-$1.00
The activity of streptomycin was found to decrease while in solution in several bacteriological culture media, human serum, and human plasma. Maximum losses ranged up to 75%. Practically all the loss in activity occurred within the first twenty-four hours. The composition of the environment and the physical factors of time, temperature, and concentrations of streptomycin were found to be significant variables in this loss of potency. It is postulated that the observed loss in potency is the result of adsorption onto constituents of these environments. A table and bibliography are included. From the Technical Laboratories of Camp Detrick, Frederick, Maryland. This manuscript apparently prepared for the Journal of Bacteriology.

PB L 78282. KENNEDY, C. C. and FREVEL, L. K. The manufacture of monochloroacetic acid from trichloroethylene at I.G. Farbenindustrie, A.G., Hoechst am Main, Germany. (FIAT Final Rept 1051). Mar 1947. 16 p. Price: Xerox-$0.50
Monochloroacetic acid is produced at Hoechst by the continuous catalytic interaction of trichloroethylene and water, with yields of 91% of monochloroacetic acid, based on trichloroethylene, being obtained. The chief merit of the process is the purity of the final product; i.e., no dichloroacetic acid or trichloroacetic acid is produced. Balanced against this advantage is the serious corrosion problem encountered in handling highly corrosive hot liquids and vapors. A flowsheet of the plant and detail drawings of the reactor and cascade still are presented, together with the operating procedure.

PB L 80201. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Chemical research on penicillin. Summary of results obtained up to Dec 20, 1943. By J. D. Dutcher and others. (Squibb Institute for Med Res Rept S 1). Dec 1943. 13 p. Price: Microfilm-$1.00 - Photostat-$1.00
The summary is divided into the following sections: (A) nomenclature, (B) isolation of crystalline sodium salt of G-penicillin, (C) degradation studies, and (D) G-penaldic acid and G-penicilloic acid and G-penicilloic and structural considerations. Squibb Institute for Med. Res.

PB L 80202. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Preparation of methyl G-penicilloate. (Squibb Institure for Med Res Rept S 2). Jan 1944. 2 p. Price: Microfilm-$1.00-Photostat-$1.00
Representative experiments are described. Squibb Institute for Med. Res.

PB L 80203. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Determination of structure. (Squibb Institute for Med Res Rept S 3). Jan 1944. 9 p. Price: Microfilm-$1.00 - Photostat-$1.00
Some of the more recent results which have been communicated without experimental data in the summarizing report of Dec. 1943 (PB 80201) are given in extenso. The page numbers in parentheses are those in the Dec. report. Squibb Rept S 3 not circulated see Rept S 17. Report S 4 is missing. Squibb Institute for Med. Res.

PB L 80204. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. The inactivation of G-penicillin by cysteine. By B. F. Chow and C. M. McKee. (Squibb Institute for Med Res Rept S 6). Jan 1944. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
It was found that the biological activity of penicillin could be abolished by cysteine hydrochloride, the extent of destruction, the minimum amount of cysteine required, inactivation with thioglycolic acid, and varying amounts of cystein necessary are given in Tables 1 through 4. Squibb Institute for Med. Res.

PB L 80205. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Synthesis. (Squibb Institute for Med Res Rept S 7). Feb 1944. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
The synthesis of penicillamine, the attempted synthesis of penaldic acid and derivatives are given in this report. Squibb Institute for Med. Res.

PB L 80206. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Synthesis. By William A. Lott and others. (Squibb Institute for Med Res Rept S 8). Jan 1944. 8 p. Price: Microfilm-$1.00 - Photostat-$1.00
This report gives in brief form various stages of progress in a variety of experimental undertakings all of which have as the ultimate purpose the synthesis of penicillin by each of several sequences of reactions. Squibb Institute for Med. Res.

PB L 80207. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Penicillin; I. Structure studies, II Synthesis. Monthly progress report, Feb 1944. (Squibb Institute for Med Res Rept S 9). Mar 1944. 16 p. Price: Microfilm-$1.00 - Photostat-$2.00
The report is divided into two parts: I - Structure studies of penicillin-G methyl ester, penicilloic acid-G dimethyl ester, acetylation with thioacetic acid, inactivation by thiol compounds, enzymatic inactivation, and penicillin-F; II - Synthesis of penicillamine, penaldic acid and derivatives, and thiazoline ring formation. Squibb Institute for Med. Res.

PB L 80208. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Informal conference on interpretation of infrared spectra of penicillin and related compounds. By H. M. Randall. (Squibb Institute for Med Res Rept S 10). Mar 1944. 10 p. Price: Microfilm-$1.00 - Photostat-$1.00
The infrared data were obtained by Dr. H. M. Randall of the University of Michigan on the following: (I) sodium penicillin G, (II) penillic acid G, (III) penillamine G hydrochloride, and (IV) synthetic desdimethylpenilloic acid (2-phenylacetylamino-methyl-4-carboxy-thiazolidine). Tables and chart are attached. Squibb Institute for Med. Res.

PB L 80209. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Penicillin; Subject matter considered patentable. (Squibb Institute for Med Res Rept S 11). Apr 1944. 9 p. Price: Microfilm-$1.00 - Photostat-$1.00
The preparation of the following: α-bromo-β-methexy-isovaleric acid, diethyl phenyl-acetamidomalonate, β-brom-dimethyl-pyruvic acid, β-benzylmercapto-dimethylpyruvic acid, oxime of β-benzylmercapto-dimthyl-pyruvic acid (α-isonitroso-β-benzylmercapto-isovaleric acid), ethyl isopropylidene-malonate dibromide, mono ethyl ester of phenacetylaminomalonic acid, ethyl-α-bromo-β,β-dimethylacrylate, 2-dimethoxymethyl-thiazolidine-4-carboxylic acid, 2,3-dihydro-4-thiazine-3-carboxylic acid-5-carboxylic acid ethyl ester, 2,3-dihydro-4 thiazine-3-carboxylic acid-5-aldehyde, 2-phenacetylaminomethyl thiazolidine-4-carboxylic acid, 2-phenylacetylaminomethyl thiazolidine-4-carboxylic acid, thiazolidine-2,4-dicarboxylic acid, diethyl aminomalonate, and diethyl phenacetylaminomalonate. Squibb Institute for Med. Res.

PB L 80210. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Penicillin. Monthly progress report, Mar 1944. (Squibb Institute for Med Res Rept S 12a). Apr 1944. 9 p. Price: Microfilm-$1.00 - Photostat-$1.00
The report is divided into:I - Structure studies of penicillin G methyl ester, oxidation product of Na-penicillin G with Tollen's reagent, oxidation with mercuric acetate, inactivation by cysteine, and preparation of penaldic acid dinitropenylhydrasone; and II Synthesis of penicillamine. Two graphs are attached. Squibb Institute for Med. Res.

PB L 80327. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Synthesis of penicillin. Progress report, Apr 1, 1944. (Squibb Institute for Med Res Rept S 12b). Apr 1944. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
The report mentions thiasolidine ring formation, preparation of penaldic acid and derivatives, the preparation of penillic acid models, and an alternate structure for penicillin. Squibb Institute for Med. Res.

PB L 80211. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Recent experiences on the crystallization of sodium penicillin G. (Squibb Institute for Med Res Rept S 13). Apr 1944. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
This report mentions some of the difficulties experienced in a large batch of commercial sodium penicillin. Squibb Institute for Med. Res.

PB L 80212. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Penicillin. Monthly progress report for Apr. 1944. (Squibb Institute for Med Res Rept S 14). May 1944. 9 p. Price: Microfilm-$1.00 - Photostat-$1.00
Report on the oxidation of penicillin with (a) Tollen's reagent, (b) mercuric acetate, and (c) hydrogen peroxide and its inactivation with acetic acid or by cysteine. The preparation of crystalline penicillin from Aspergillus flavus and the preparation of d,l-penicillamine by means of the base. Squibb Institute for Med. Res.

PB L 80213. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Synthesis of penicillin. Progress report for May 1944. (Squibb Institute for Med Res Rept S 15). May 1944. 8 p. Price: Microfilm-$1.00 - Photostat-$1.00
This report is concerned with the preparation and reaction of desdimethyl penicilloic acid, azlacetonization of penaldic acid dimethyl acetal and the preparation of various propionic acid derivatives and ring closure experiments. Squibb Institute for Med. Res.

PB L 80214. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Comments on additional infrared data. By H. M. Randall. (Squibb Institute for Med Res Rept S 16). May 1944. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
The spectra of the following compounds have been taken and are presented: (a) penicillin G methyl ester, (b) benzylammonium salt of penicilloic acid G benzylamide (by degradation of penicillin G), (c) benzylammonium salt of penicilloic acid G benzylamide (synthetic), (d) d-monoethyl penicilloate (synthetic), and (e) condensation product from d,l-penicillamine and ethoxymethylene-phenyl-azlactone. Squibb Institute for Med. Res.

PB L 80215. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Purification of penicillin. (Squibb Institute for Med Res Rept S 17). Aug 1943. 7 p. Price: Microfilm-$1.00 - Photostat-$1.00
The report is divided into three parts, 1 and 2, purification of penicillin and purification and crystallization of penicillin are extracts prepared by Dr. H. T. Clarke from Squibb Reports S-111 and S-111a, and part 3, Recent experiences on the crystallization of sodium penicillin G is that prepared at special request of Dr. Clarke and appears as Squibb Rept S-13, Apr. 1944. Squibb Institute for Med. Res.

PB L 80216. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Preparation of the potassium salt of penicillin G. (Squibb Institute for Med Res Rept S 18). May 1944. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
The method of preparation from sodium penicillin G and analysis are given in the report.

PB L 80217. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Penicillin. Monthly progress report for May 1944. (Squibb Institute for Med Res Rept S 19). Jun 1944. 12 p. Price: Microfilm-$1.00 - Photostat-$1.00

The report is concerned with the oxidation, inactivation, and crystalline preparation of sodium penicillin, the oxidation of penicilloic acid G, methyl ester, the preparation, oxidation and pyrolysis of penillic acid, the preparation of penilloic acid G, the condensation of ethyl penaldate and d,l-6-benzyl penicillamine, and the preparation and reaction of model thiazolidines. Squibb Institute for Med Res.

PB L 80218. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Synthesis of penicillin. Progress report for June 1944. (Squibb Institute for Med Res Rept S 20). June 1944. 9 p. Price: Microfilm-$1.00 - Photostat-$1.00

The following data are reported: The preparation and reaction of penicilloic acid, Desdimethyl and its ethyl ester; the preparation and attempted hydrolysis of ethyl penicilloate; various condensations of the "Bromazlactone"; the formation of azlactones by using condensing agents other than acetic anhydride; and the preparation of 2-phenyl-4-benzal-5-oxazolone, 2-benzyl-4-bromo-4-diethoxymethyl-5-oxazolone, ethyl β-acetoxy-α-phenacetylamino-acrylate, 2,4-dibenzal-3-phenyl-5-oxazolone, N-phenacetyl-N-phenylglycine, and 2-benzyl-?-imidazoline-4-carboxylic acid. Squibb Institute for Med. Res.

PB L 80219. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Penicillin. Monthly progress report for June, 1944. (Squibb Institute for Med Res Rept S 21). Jul 1944. 14 p. Price: Microfilm-$1.00 - Photostat-$1.00

Eleven thiazolidine-4-carboxylic acids, variously substituted in position 2, were allowed to react with mercuric acetate under nearly identical conditions. Inactivation studies were continued. Sulfur lability of penicillin G and its degradation products towards alkaline plumbite, alkaline hydrolysis of penillic acid, action of cupric sulfate on penicillin G, experiments related to the synthesis of penillamine, molecular weight of penicillin G methyl ester, and crystalline sodium penicillin from Aspergillus flavus are treated in the report. Squibb Institute for Med. Res.

PB L 80220. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Synthesis of penicillin. Progress report for July 1944. (Squibb Institute for Med Res Rept S 22). Jul 1944. 9 p. Price: Microfilm-$1.00 - Photostat-$1.00

The report covers the following data: hydrolysis of penicilloic ester; preparation of α-ethyl-d-γ-penicilloate, α-ethyl-β-methyl-disdimethyl penicilloate, α-ethyl-β-methyl-d-γ-penicilloate; condensations of the "Bromazlactone," azlactonization experiments, resolution of penaldic acid dimethyl acetal, preparation of the benzylamide of α-phenylacetylamino-β,β-dimethoxy propionic acid, and condensations of dl-penicillamine and methoxymethylene azlactone. Squibb Institute for Med. Res.

PB L 80221. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Comments on infrared spectra of compounds 14-16 & 18. (Squibb Institute for Med Res Rept S 23). Jul 1944. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00

The infrared spectra data are given in tabular form for: monomethyl penicilloate G (syn.), 5,5-dimethyl-thiazolidine-4-carboxylic acid from dl-penicillamine (thin and thick layers), 2-benzyl-5,5-dimethyl-thiazolidine-4-carboxylic acid, 2-(2)-furyl-5,5-dimethyl-thiazolidine-4-carboxylic acid, benzylammonium salt of penilloic benzylamide G (syn.), and 2-n-propyl thiazolidine-4-carboxylic acid. Squibb Institute for Med. Res.

PB L 80222. U.S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Penicillin. Monthly progress report, Jul. 1944. (Squibb Institute for Med Res Rept S-24) Aug 1944. 13 p. Price: Microfilm-$1.00 - Photostat-$1.00

The report covers the following: Oxidation with mercuric acetate, inactivation by cysteine and by acetic acid, sulfur lability, isolation of isopenillic acid G, reaction of sodium penicillin G with cupric sulfate, and ultraviolet spectrum of 2-benzyl-imidazol-4, 5-dicarboxylic acid. Squibb Institute for Medical Research.

PB L 80223. U.S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Synthesis of penicillin. Progress report. (Squibb Institute for Med Res Rept S-25) Aug 1944. 10 p. Price: Microfilm-$1.00 - Photostat-$1.00

The hydrolyses of α-ethyl d-γ-penicilloate are continued under various conditions. In one series the d-penicilloic acid was isolated from the hydrolysis mixture as a lead salt and then penicilloic acid was obtained by removal of the lead as lead sulfide. In a second series the d-penicilloic acid was isolated by the procedure indicated in Merck report of June 30, 1944. The lead salt method seems more practical. The preparation of benzylamine derivative of ethyl penaldate was carried out. The study of the conditions and reagents that may bring about azlactonization was continued. Further study was made on the resolution of penaldic acid dimethyl acetal. Various syntheses are under consideration involving the condensation of an acetal with penicillamine to produce a thiazolidine ring. The preparation of various intermediates which may lead to a model of penillic acid or its esters is continued. Squibb Institute for Medical Research.

PB L 80224. U.S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Comments on infra-red spectra of compounds 10-13. (Squibb Institute for Med Res Rept S-26) May 1944. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00

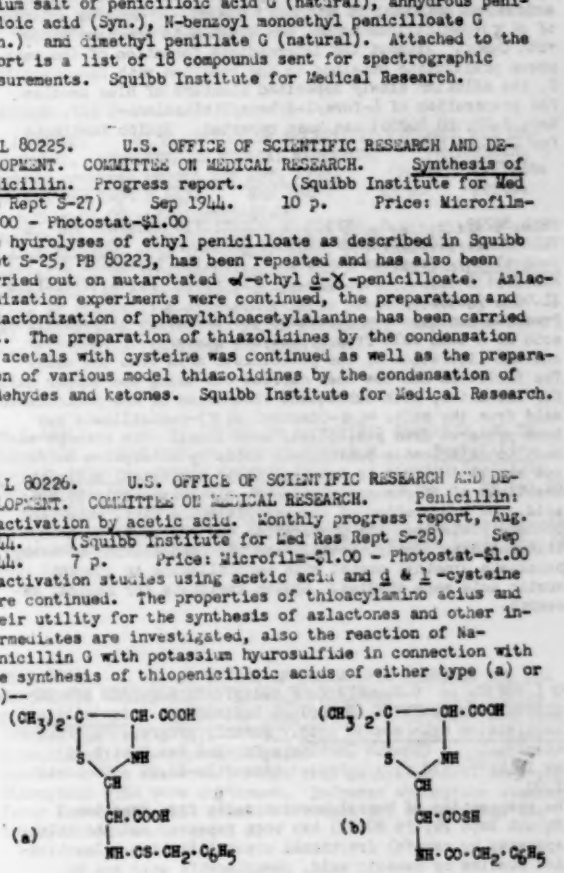
This report contains the spectrographic measurements for: benzylammonium salt of penicilloic benzylamide G (Syn), monosodium salt of penicilloic acid G (natural), anhydrous penicilloic acid (Syn.), N-benzoyl monoethyl penicilloate G (Syn.) and dimethyl penillate G (natural). Attached to the report is a list of 18 compounds sent for spectrographic measurements. Squibb Institute for Medical Research.

PB L 80225. U.S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Synthesis of penicillin. Progress report. (Squibb Institute for Med Res Rept S-27) Sep 1944. 10 p. Price: Microfilm-$1.00 - Photostat-$1.00

The hydrolyses of ethyl penicilloate as described in Squibb Rept S-25, PB 80223, has been repeated and has also been carried out on mutarotated α-ethyl d-γ-penicilloate. Azlactonization experiments were continued, the preparation and azlactonization of phenylthioacetylalanine has been carried out. The preparation of thiazolidines by the condensation of acetals with cysteine was continued as well as the preparation of various model thiazolidines by the condensation of aldehydes and ketones. Squibb Institute for Medical Research.

PB L 80226. U.S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Penicillin: Inactivation by acetic acid. Monthly progress report, Aug. 1944. (Squibb Institute for Med Res Rept S-28) Sep 1944. 7 p. Price: Microfilm-$1.00 - Photostat-$1.00

Inactivation studies using acetic acid and d & l -cysteine were continued. The properties of thioacylamino acids and their utility for the synthesis of azlactones and other intermediates are investigated, also the reaction of Na-penicillin G with potassium hyurosulfide in connection with the synthesis of thiopenicilloic acids of either type (a) or (b)—



PB L 80227. U.S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Synthesis of penicillin. Progress report. (Squibb Institute for Med Res Rept S-29) Oct 1944. 8 p. Price: Microfilm-$1.00 - Photostat-$1.00

The rotation of samples of penicilloic acid, taken in absolute alcohol, have been repeated under vigorously controlled conditions, and are reported, also the preparation of the following: α,β-dimethyl d(γ)-penicilloate, 2-benzyl-4-methyl-4-diethoxymethyl oxazolone-5 (attempted), synthesis of penillic acid (attempted), N-sorbyl glycine, 2-acetonyl thiazolidine-4-carboxylic acid, and 2-benzyl-imidazolone-4. Work was done to determine the stability of thioamides and the ease of reaction of a thiazolidine -NH with dithiophenylacetic acid. Squibb Institute for Medical Research.

PB L 80228. U.S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Penicillin: Inactivation by acetic acid. Monthly progress report, Sep. 1944. (Squibb Institute for Med Res Rept S-30) Oct 1944. 13 p. Price: Microfilm-$1.00 - Photostat-$1.00

Work on inactivation by acetic acid (Cf. Squibb Rept S-24; PB 80222) and by cysteine (Cf. Squibb Rept S-28; PB 80226) is continued in this report. In Squibb Rept S-24 it was reported that Na-penicillin G treated in aqueous solution with a large or moderate excess of H_2O_2 undergoes cleavage with the formation of phenylacetyl-amino-acetaldehyde, while methyl penicillin G similarly treated in 60% aqueous acetone was recovered unchanged. The latter reaction has been repeated. The reaction of thiazolidines and penicillin G with mercuric iodide-methyl iodide together with a study of the complexes thus formed is reported. 2-Isopropyl-thiazolidine-4-carboxylic acid and 2-isopropyl-5,5-dimethyl-thiazolidine-4-carboxylic acid, both described in Squibb Rept S-21, PB 80219, were used in exploratory studies. In Squibb Rept S-21 the preparation of a crystalline cupric salt from Na-penicillin G and cupric sulfate solution was described. In Squibb Rept S-24 it was reported that by decomposition of this salt with hydrogen sulfide penicillic acid G was obtained in about 17% yield. An aqueous solution of d(γ)-penicilloic acid G was treated in the same manner with $CuSO_4$. Without the intermediate formation of the amorphous precipitate obtained in the reaction with Na-penicillin G, the solution slowly deposited clusters of blue needles. The preparation of 4-formyl-2-benzylthiazolone-5 (Cf. Squibb Rept S-28; PB 80226) has been repeated. Squibb Institute for Medical Research.

PB L 80229. U.S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Synthesis of penicillin. Progress report. (Squibb Institute for Med Res Rept S-31) Nov 1944. 13 p. Price: Microfilm-$1.00 - Photostat-$1.00

Previous reports have described the isolation of penicilloic acid as a lead salt from hydrolysis mixtures of the ester and the liberation of the penicilloic acid from the salt. The isolation has now been carried out using the copper salt for isolation, with subsequent liberation of the penicilloic acid from the salt. α,β-Dimethyl d(γ)-penicilloate has been prepared from penicilloic acid itself. An attempt was made to azlactonize penicilloic acids by adsorption on various agents in order to increase their biological activity. Reactions of α-phenacetylamino-α-diethoxymethylpropionic acid, the preparation of phenacetylalanine ethyl ester and phenacetylalanine, the preparation and reactions of methyl thiopenaldate diethyl acetal, and the condensation of methyl penaldate dimethyl acetal with penicillamine in glacial acetic acid were studied. Squibb Institute for Medical Research.

PB L 80230. U.S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Penicillin: Inactivation with acetic acid. Monthly progress report for Oct. 1944. (Squibb Institute for Med Res Rept S-32) Nov 1944. 12 p. Price: Microfilm-$1.00 - Photostat-$1.00

The preparation of benzylammonium salts from Fraction I (Squibb Rept 24; PB 80222) has been repeated and the salts separated by careful fractional crystallization. Inactivation studies by benzoic acid, phenylacetic acid and by cysteine were continued. The sulfhydryl group in N-formyl-dl-penicillamine was investigated. The behavior of methyl 2-isopropyl-5,5-dimethylthiazolidine-4-carboxylate towards H_2O_2 was examined. Reaction of azlactones and of methyl penicillin G with thiocyanic acid was studied. The optical behavior of cupric salt of penicilloic acid G was studied as was that of other penicilloic acid G preparations towards cupric sulfate. Squibb Institute for Medical Research.

PB L 80231. U.S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Synthesis of penicillin. Progress report. (Squibb Institute for Med Res Rept S 33) Dec 1944. 10 p. Price: Microfilm-$1.00 - Photostat-$1.00

In a previous report (Squibb Rept S-31; PB 80229) the isolation through a copper salt of a laevo rotating d-penicilloic acid was described. This acid has been converted to a new crystalline dimethyl ester by treatment with diazomethane and to a β-methyl ester (crude) by the partial saponification of the diester. Considerable muta-rotation accompanied this partial saponification as indicated by a rise in rotation. An attempt to benzoylate the dimethyl ester has not yielded a crystalline product. The attempted azlactonization of laevo rotating d-penicilloic acid was undertaken. Preliminary experiments show that it is possible to fuse methyl penaldate dimethyl acetal with penicillamine hydrochloride and obtain formation of α-methyl penicilloate. The preparation of α-bromo-α-phenacetylamino-β,β-diethoxypropionic acid was attempted in order to obtain a penaldic acid acetal derivative which could not lose alcohol upon azlactonization and which would, therefore, have a true aldehyde group in the form of an acetal. Squibb Institute for Medical Research.

PB L 80232. U.S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Penicillin: Inactivation by acetic acid. Monthly progress report for Nov 1944. (Squibb Institute for Med Res Rept S 34) Dec 1944. 18 p. Price: Microfilm-$1.00 - Photostat-$2.00

The report continues the work on inactivation (A) by acetic acid, and (B) by cysteine, the benzylation of penicillin G-methyl cysteine and its benzylation product with mercuric chloride, reaction with thiocyanic acid--results and discussion, the preparation of an optically active azlactone, the reaction of methyl penicillin G with hydrazine, and the significance of "Penicilloate Band" at 280 mμ. Squibb Institute for Medical Research.

PB L 80233. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Synthesis of penicillin. Progress report. (Squibb Institute for Med Res Rept S 35). Jan 1945. 9 p. Price: Microfilm-$1.00 - Photostat-$1.00

In previous reports (Squibb Rept S-31; PB 80229 and Rept. S-33; PB 80231) the isolation of a laevo rotating penicilloic acid and the preparation of its dimethyl ester and β-methyl ester were described. As a further characterization of this series of compounds, the dimethyl ester has been benzoylated and the acid itself decarboxylated to give penilloic acid. The preparation of penaldic acid dimethyl acetal derivatives is described and the attempted formylation of formylaminoacetamide. Squibb Institute for Med. Res.

PB L 80234. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Penicillin: Inactivation by acetic acid. Monthly progress report for Dec. 1944. (Squibb Institute for Med Res Rept S 36). Jan 1945. 26 p. Price: Microfilm-$1.00 - Photostat-$2.00

The following data is reported: inactivation (A) by acetic acid — the compound N-acetyle-d (α)-penicilloic has been obtained in crystalline form, the reaction of methyl penicillin G with acetic acid-acetic anhydride, the action of acetic anhydride on acetic acid-inactivated methyl penicillin G and penicillin G; (B) by cysteine — mercuric chloride degradation of benzylation products of penicillin G-β-thiolethylamine and penicillin G. Results and discussion, the reaction

of benzylation product of penicillin G-β-thiolethylamine with mercuric chloride, the dinitrophenylhydrazone from reaction of penicillin G-methyl-cysteine with mercuric chloride; a discussion of optically active azlactones wherein a few cleavage experiments were carried out with various preparations of l-(-)-2-phenyl-4-isobutylazolone with the object of ascertaining whether or not such reactions are accompanied by racemization; the results and a discussion of the behavior of reaction product from methyl penicillin G and thiocyanic acid towards mercuric chloride; results of experiments with methyl penicillin G thiohydantoin, and the preparation of the levorotatory penicilloic acid G isomer formed via cupric salt from penicillin G and d (α)- and d (γ)-penicilloic acids G. Squibb Institute for Med. Res.

PB L 80235. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Synthesis of penicillin. Progress report. (Squibb Institute for Med Res Rept S 37). Feb 1945. 7 p. Price: Microfilm-$1.00 - Photostat-$1.00

Report on the rotation activity of certain penicilloic acid G derivatives and the study of ring closure of certain penicillamine derivatives. Squibb Institute for Med.Res.

PB L 80236. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Penicillin: Inactivation by cysteine. Monthly progress report for Jan. 1945. (Squibb Institute for Med Res Rept S 38). Feb 1945. 24 p. Price: Microfilm-$1.00 - Photostat-$2.00

The study of the inactivation of penicillin derivatives by cysteine is continued. The results are summarized in Table I. The apparent decrease of sulfhydryl during inactivation of sodium penicillin G results are given in Table II. In Table III the slopes of the $[\alpha]_D$-time curves during the first few hours of interaction are given. Studies on reaction product from methyl penicillin G and thiocyanic acid, the study of optically active azlactones, and the reaction of mercuric acetate on penicillin derivatives are discussed at some length. Squibb Institute for Med. Res.

PB L 80237. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Synthesis of penicillin. Progress report. (Squibb Institute for Med Res Rept S 39). Mar 1945. 7 p. Price: Microfilm-$1.00 - Photostat-$1.00

The preparation of various homologs of penicilloic acid and penicillic acid esters by procedures described in previous reports is continued. The α-ethyl 2-methyl-d-penicilloate previously described has been obtained by a somewhat simplified isolation procedure and has been hydrolyzed to the crude acid. Also the α-methyl 6-methyl-d-penicilloate has been obtained, and the attempted ring closure of N-(N¹-phenylacetyl-β,δ-dimethoxyalanyl) methyl ester is given in the report. Squibb Institute for Med. Res.

PB L 80238. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Penicillin. Monthly progress report for Feb. 1945. (Squibb Institute for Med Res Rept S 40). Mar 1945. 21 p. Price: Microfilm-$1.00 - Photostat-$2.00

The following data are reported: studies on reaction product from methyl penicillin G and thiocyanic acid; treatment of methyl penicillin G thiohydantoin with (a) silver nitrate in ethanol (b) with excess alkali; inactivation by N-methyl-cysteine, the polarographic behavior of penicillin G-cysteine methyl ester and penicillin G-β-thiolethylamine; the inactivation and oxidation studies, and optically active azlactones. Squibb Institute for Med. Res.

PB L 80239. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Synthesis of penicillin. Progress report. (Squibb Institute for Med Res Rept S 41). Apr 1945. 7 p. Price: Microfilm-$1.00 - Photostat-$1.00

The preparation of various homologs of penicilloic acid and the esters is continued. By the fusion of the methyl ester of penicillamine and methyl α-phenylacetamido-α-methyl-β,β-diethoxy propionate, the dimethyl ester of 6-methyl-penicilloic acid has been formed. The β-methyl ester of 6-methyl-penicilloic acid has been obtained by the partial saponification of this dimethyl ester. Squibb Institute for Med. Res.

PB L 80240. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Penicillin. Monthly progress report for Mar. 1945. (Squibb Institute for Med Res Rept S 42). Apr 1945. 12 p. Price: Microfilm-$1.00 - Photostat-$1.00

The report covers work on inactivation of sodium penicillin G by sodium sulfite, studies on reaction product from methyl penicillin G and thiocyanic acid and the reaction of this product to (a) mercuric, acetate, (b) acetic acid, and (c) potassium permanganate, desulfurization of thiohydantoin derivatives, study of β-lactam structure, and the preparation d-(γ)-penicilloic acid G derivatives. Squibb Institute for Med. Res.

PB L 80241. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Synthesis of penicillin. Progress report. (Squibb Institute for Med Res Rept S 43). May 1945. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00

The preparation of various intermediates for the synthesis of homologs of penicilloic acid is continued. The alkylation of ethyl α-phenylacetylaminoacetoacetate has been carried out to give ethyl α-methyl-α-phenylacetylaminoacetoacetate, which is being condensed with penicillamine. The azlactonization of β-methyl 6-methyl-d-penicilloate has been attempted and the characterization of the product is in progress. The preparation of nor-penicillonitrile and its benzylamine derivative is reported. Squibb Institute for Med. Res.

PB L 80242. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Penicillin. Monthly progress report for Apr. 1945. (Squibb Institute for Med Res Rept S 44). May 1945. 23 p. Price: Microfilm-$1.00 - Photostat-$2.00

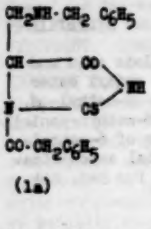
Studies on: (a) the reaction product from penicillin G and its derivatives with thiocyanic acid; (b) inactivation of penicillin G by β-dimethylamino- and β-diethylaminoethyl-mercaptan; (c) synthesis of β-lactam structures; (d) reactions of β-methyl-N-nitroso-α-amido penicilloate G; and (e) crystalline penicillin salts containing components other than G. Squibb Institute for Med. Res.

PB L 80243. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Penicillin. Monthly progress report for May 1945. (Squibb Institute for Med Res Rept S 45). Jun 1945. 15 p. Price: Microfilm-$1.00 - Photostat-$1.00

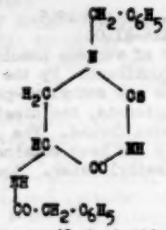
This is a monthly progress report continuing the same material reported in Squibb Rept. S-44; PB 80242. Squibb Institute for Med. Res.

PB L 80244. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Penicillin. Monthly progress report for Jun. 1945. (Squibb Institute for Med Res Rept S 46). Jul 1945. 13 p. Price: Microfilm-$1.00 - Photostat-$1.00

Studies on the reaction product from methyl penicillin G and thiocyanic acid were continued. Infrared absorption studies favor the dihydrothio uracil structure 1 b rather than the thiohydantoin structure 1 a.



(1a)



(1b)

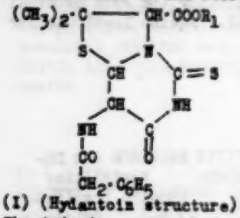
The reactions of several 2-thio uracil derivatives were studied. The approach to β-lactams via 1,2,3 triazines is still being explored and the synthesis of suitable model compounds investigated. Squibb Institute for Med. Res.

PB L 80245. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Penicillin: Monthly progress report for Jul. 1945. (Squibb Institute for Med Res Rept S 47). Aug 1945. 16 p. Price: Microfilm-$1.00 - Photostat-$2.00
Studies on the reaction product from methyl penicillin G and thiocyanic acid were continued 2-thio-uracils were used as model compounds. The triazine approach to β-lactam structure was continued. Squibb Institute for Med. Res.

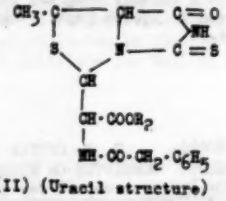
PB L 80246. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Penicillin: Studies on the reaction product of methyl penicillin G and thiocyanic acid. Monthly progress report for Aug. 1945. (Squibb Institute for Med Res Rept S 48) Sep 1945. 13 p. Price: Microfilm-$1.00 - Photostat-$1.00
The structural study of the reaction product reported in Squibb Rept S-47; PB 80245, is continued and enlarged upon in this report. Reference and comparison is made to Cornell reports D-25, D-31, and D-34. Squibb Institute for Med. Res.

PB L 80247. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Penicillin: Monthly progress report for Sep. 1945. (Squibb Institute for Med Res Rept S 49). Oct 1945. 10 p. Price: Microfilm-$1.00 - Photostat-$1.00
In this report the reaction of thiocyanate derivative B (Squibb Rept S 48, 9; PB 80246), has been further investigated. The formation of two alkali isomerization products is confirmed. The triazine approach to β-lactam structure is continued. Squibb Institute for Med. Res.

PB L 80248. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Penicillin: Studies on the reaction products of penicilloic G esters and thiocyanic acid and the β-lactam structure. Monthly progress report for Oct. 1945. (Squibb Institute for Med Res Rept S 50). Nov 1945. 14 p. Price: Microfilm-$1.00 - Photostat-$1.00
Work was continued on the thiocyanate derivatives A and B of methyl penicillin G to clarify the stereochemical relationships between these compounds and to gain some insight into the mechanism of the rearrangement I → II



(I) (Hydantoin structure)



(II) (Uracil structure)

The triazine approach to β-lactam structure was continued. Squibb Institute for Med. Res.

PB L 80249. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. An iodometric method for the assay of penicillin preparations. (Squibb Institute for Med Res Rept S 51). Nov 1945. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
The iodine consumption of a neutral solution of alkali-inactivated sodium penicillin G is a function of time, and under the conditions given in the report becomes constant after 25-30 minutes. Tables I and II give correlation between the iodometric and bioassay values and a comparison of the values obtained by the iodometric, the alkalimetric, and the two standard bioassay methods. Squibb Institute for Med. Res.

PB L 80250. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Synthesis of penicillin. Progress report. (Squibb Institute for Med Res Rept S 52 (Final)). Nov 1945. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
Procedures used in the synthesis of the benzyl ester of penicillin and of p-hydroxyphenylacetic acid. Squibb Institute for Med. Res.

PB L 80251. U. S. OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT. COMMITTEE ON MEDICAL RESEARCH. Penicillin: Supplementary report on work completed after submission of final report on Nov. 1, 1945. (Squibb Institute for Med Res Rept S 53). Jan 1946. 12 p. Price: Microfilm-$1.00 - Photostat-$1.00
Studies on the thiocyanate derivatives of methyl penicillin G and related compounds, behavior of methyl penicillenate G towards mercuric acetate, the preparation of d,l-2-phenyl-4-phenyl-5(4)-oxazolone, and lactam structure (Triazine approach). Squibb Institute for Med. Res.

Dyes

PB L 73377. I. G. FARBENINDUSTRIE A. G., FRANKFURT/MAIN-HÖCHST, GERMANY. Manufacturing reports on dyes and dye intermediates. (FIAT Microfilm Reel GC 124, Frames 1653-2508). 1941-1945. 855 f. Price: Microfilm-$6.00 - enlargement print-$85.50
This FIAT microfilm reel consists of items in the field of dye chemistry. The material originates at the I. G. Farbenindustrie A. G., Frankfurt/Main-Höchst. Individual items are listed below and will be available as enlargement prints only; the entire reel may be purchased in microfilm form for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. Most of the material is in English.

Frames	Title	Price
1653-1668 PB L 73377	Development of methane chlorination and the plants connected therewith. By Dr. Hilken, 1941. In German.	$2.00
1669-1673 PB L 73377	Exchange reactions with chlorinated Kogasins. By Dr. Plotz, 1943. In German.	1.50
1674-1695 PB L 73377	Preparation of "Hostaponsäure" or "Hostapon" by the radiologic method. By Dr. Schlimmelschmidt, 1943. In German.	2.50
1696-1710 PB L 73377	On "Hostamide" polyurethanes prepared by the Höchst method. By Dr. Orthner, 1943. In German.	1.50
1711-1718 PB L 73377	Preparation of acrylamides and their use. By Corell, 1943. In German.	1.50
1719-1722 PB L 73377	Preparation of acrylamides. By Corell, 1943. In German.	1.50
1723-1728 PB L 73377	Experiments on the improvement of the stability of alkaline earth sulfide luminous paints,	

especially "Leuchtblau". By Inorganic Laboratory I. G. Farbenindustrie A. G., 1944. In German. 1.50

1729-1735 PB L 73377 — Alizarin dyes. By I. G. Farbenindustrie, Alizarin department, 1945. In German. 1.50

1736-1737 PB L 73377 — List, chemical composition and production figures. By I. G. Farbenindustrie, Alizarin department, 1945. In German. 1.50

1738-1742 PB L 73377 — Intermediate products of the Alizarin department of I. G. Farbenindustrie A. G., Höchst, 1945. In German. 1.50

1743-1744 PB L 73377 — Preservation of vegetables. By the Alizarin department of I. G. Farbenindustrie A. G., Frankfurt/Main-Höchst, 1945. In German. 1.50

The rest of this reel, with a few exceptions, presents manufacturing data on dyes and intermediate in English. For each, as listed individually below, a report is given in question and answer form on questionnaires furnished by U. S. authorities to the industrial plants.

1745-1747 PB L 73377 — Sulfoflavin Brilliant FF (4-amino-naphthal-sulfonic acid-toluidide). 1.50

1748 PB L 73377 — Supra Light Yellow GGL (sulfonated condensation product of 3-hydroxy-quinaldine-4-carboxylic acid with phthalic anhydride. 1.50

1749-1751 PB L 73377 — Alizarin Direct Blue AGG (acetylamino-anilido-amino-anthra-quinone-sulfonic acid). 1.50

1752-1754 PB L 73377 — Alizarin Direct Blue AR (N-methyl-acetylamino-anilido-amino-anthra-quinone-sulfonic acid). 1.50

1755-1757 PB L 73377 — Alizarin Direct Violet E2B (Mixture of 1,4-diamino-anthraquinone-disulfonic acids). 1.50

1758-1759 PB L 73377 — Alizarin Direct Violet EFF (1,4-diamino-anthraquinone-disulfonic acid). 1.50

1760-1762 PB L 73377 — Alizarin Pure Blue FFB (carbethoxy-anilino-amino-anthraquinone-sulfonic acid). 1.50

1763-1764 PB L 73377 — Anthralan Blue FR (dihydroxy-ethylamino-sulfo-phenyl-amino-amino-anthraquinone-sulfonic acid). 1.50

1765-1767 PB L 73377 — Supranol Brilliant Blue G (carbe-thoxy-benzyl-methyl-phenylamino-amino-anthraquinone-sulfonic acid). 1.50

1768-1770 PB L 73377 — Alizarin Chrome Blue FFG (carboxy-hydroxy-phenyl-sulfone-methoxy-benzylamino-amino-anthraquinone-sulfonic acid). 1.50

1771-1772 PB L 73377 — Alizarin Black S paste (5,8-dihydroxy-1, 4-naphthoquinone-sulfite). 1.50

1773-1774 PB L 73377 — Alizarin Black WX Extra S paste (5,8-dihydroxy-1,4-naphthoquinone (naphthazarin)). 1.50

1775-1777 PB L 73377 — Chrome Fast Yellow 8GL and 5 GD (condensation product of 4-amino-naphthol-sulfonic acid and p-amino-salicylic acid). 1.50

1778-1780 PB L 73377 — Indanthrene Khaki GG (tetraanthra-quinoyl-anthraquinone carbazolized). 1.50

1781-1782 PB L 73377 — Alizarin Brown MD (mixture of antha-gallol and rufigallol). 1.50

1783 PB L 73377 — Sirius Supra Blue FFB (sulfonated dioxazine from chloranil and 4-amino-4'-chloro-diphenylamino-2-sulfonic acid). 1.50

1784-1787 PB L 73377 — Sirius Supra Blue FFGL (sulfonated dioxazine compound, prepared from the condensation product of chloranil and 3-amino-N-ethyl-carbazole). 1.50

1788-1789 PB L 73377 — Sirius Supra Blue FF2GL (dioxazine from chloranil and 4-amino-diphenyl-amino-2-sulfonic acid). 1.50

1790-1792 PB L 73377 — Sirius Supra Blue DDRL (sulfonated dioxazine from chloranil and 3-amino-N-ethylcarbazole). 1.50

1793-1795 PB L 73377 — Sirius Supra Blue F3GL (sulfonated dioxazine from chloranil and 3-aminopyrene). 1.50

1796-1798 PB L 73377 — Sirius Supra Blue F3RL (sulfonated dioxazine from chloranil and 3-aminocarbazole). 1.50

1799 PB L 73377 — Sirius Supra Violet FRL (sulfonated dioxazine from chloranil and 2-aminofluorene). 1.50

1800-1802 PB L 73377 — Indanthrene Printing Yellow GCW Supra-fix paste (Monobromo-di-chloro-dibenzopyrene-quinone). 1.50

1803-1804 PB L 73377 — Indanthrene Golden-Yellow GK (T) (dibenzpyrene-quinone). 1.50

1805-1807 PB L 73377 — Indanthrene Golden Yellow GK (N) (dibenzopyrene-quinone). 1.50

1808-1810 PB L 73377 — Indanthrene Golden Yellow RK (dibromated dibenzopyrene-quinone). 1.50

1811-1812 PB L 73377 — Indanthrene Golden Yellow RK for Indanthrene Printing Brown TM (dibromated dibenzopyrene-quinone). 1.50

1813-1815 PB L 73377 — Indanthrene Yellow FFRK ( ),)'-dianthrimide ring closed). 1.50

1816-1818 PB L 73377 — Indanthrene Yellow 3 R (1,5-trianthrimide carbazollized). 1.50

1819-1820 PB L 73377 — Indanthrene Yellow 3 RT (1,5-trianthrimide carbazollized). 1.50

1821-1823 PB L 73377 — Indanthrene Gray M (product of ring closure from anthraquinoyl-amino-benzanthrone-pyrazole-anthrone). 1.50

1824-1826 PB L 73377 — Indanthrene Gray MG (anthraquinonyl-amino-benzanthrone-pyrazolanthrone). 1.50

1827-1828 PB L 73377 — Indanthrene Gray M free from copper (anthraquinonyl-amino-benzanthrone-pyrazolanthrone, ring closed). 1.50

1829-1831 PB L 73377 — Indanthrene Khaki GG (tetraanthra-quinoyl-anthraquinone, carbazollized). 1.50

1832-1834 PB L 73377 — Indanthrene Navy Blue R (pyrazole-benzanthrone (cyclic structure)). 1.50

1835-1836 PB L 73377 — Indanthrene Brown GR (trianthrimide condensed to form nuclei). 1.50

1837-1839 PB L 73377 — Indanthrene Brown RRD (thioindigo from 2,1-naphthiophene). 1.50

1840-1841 PB L 73377 — Indanthrene Printing Blue B Base (dyestuff from 5,7-dichloro-thionaphthene and 4-methyl-1, 5-chloro-7-methoxy-isatin). 1.50

Dyes (contd)

1842-1844 PB L 73377 Indanthrene Printing Blue GG Base (dyestuff from 4-chloro- α-naphthol and 4-methyl-5-chloro-7-methoxy-isatin). 1.50

1845-1846 PB L 73377 Indanthrene Printing Blue R Base (product from 4,6-dimethyl-5,7-dichloro-isatin and 4-chloro-2-naphthol). 1.50

1847-1848 PB L 73377 Indanthrene Printing Brown R Base (product of 2,1-naphthiophene and 5,7-dichloroisatin). 1.50

1849-1850 PB L 73377 Indanthrene Printing Brown 3 R (condensation product of 6-chloro-7-methylisatin and naphthiophene). 1.50

1851-1853 PB L 73377 Indanthrene Printing Black BL Suprafix paste (glycerol leuco paste of the mixture of Indanthrendruckschwarz BL and Indanthrengoldgelb RK). 1.50

1854-1856 PB L 73377 Indanthrene Printing Black TL Suprafix paste (Suprafix paste of Indanthrene Printing Black BL shaded). 1.50

1857-1859 PB L 73377 Indanthrene Printing Black F Article Moist (product of 6-chloro-1,2-naphthiophene and 5,7-dibromoisatin). 1.50

1860-1861 PB L 73377 Indanthrene Printing Black B (o-tolu -5,6-hydroxy-naphthocarbazole-2-indol indigo). 1.50

1862-1864 PB L 73377 Indanthrene Printing Black BGL F-product of 100% strength (9-Cl-1,2-naphthoxythiophene and isatin). 1.50

1865-1866 PB L 73377 Indanthrene Reddish Violet RH (5,5'-dichloro-7,7'-dimethyl-bis-thionaphthene-indigo). 1.50

1867-1868 PB L 73377 Indanthrene Reddish Violet RH Now (5,5'-dichloro-7,7'-dimethyl-bix-thionaphthene indigo). 1.50

1869-1871 PB L 73377 Indanthrene Brilliant Orange GR and Indanthrene Bordeaux RR condensation product of "tetra acid" and o-diaminobenzene (cis- and transform)). 1.50

1872-1873 PB L 73377 Indanthrene Printing Brown B base (condensation product from 1,4,5,8-naphthalene-tetracarboxylic acid and ethoxy-1,2-phenylenediamine). 1.50

1874-1876 PB L 73377 Indanthrene Printing Brown 5 R base E (condensation product of naphthalene-1,4,5,8-tetracarboxylic acid and 1-chloro-3,4-diaminobenzene). 1.50

1877-1879 PB L 73377 Indanthrene Scarlet GG paste and Suprafix paste (condensation product of "tetra acid" and o-diaminobenzene). 1.50

1880-1881 PB L 73377 Indanthrene Scarlet GC powder and fine powder for coloring (condensation product of 1,4,5,8-naphthalene-tetracarboxylic acid and 1,2-diaminobenzene). 1.50

1882-1883 PB L 73377 Indanthrene Turquoise Blue GK (4-aminoanthraquinone-1(N)-2-1'-2'(N)-4'-chlorobenzacridone). 1.50

1884-1886 PB L 73377 Algol Scarlet GG (2-thionaphthene-acenaphthene indigo). 1.50

1887-1888 PB L 73377 Algol Scarlet GGRN (brominated 6,6'-diethoxy-thioindigo). 1.50

1889-1890 PB L 73377 Algol Blue G base (product of 6,7-dibromoisatin and 2-hydroxy anthracene). 1.50

1891-1892 PB L 73377 Algol Red 5 B (thioindigo). 1.50

1893-1895 PB L 73377 Helindon Brown CRD (sulfurization product of 2,5-di(p-chloro-anilido)-3,6-dichloro-1,4-benzoquinone). 1.50

1896-1898 PB L 73377 Helindon Brown CV (2,5-dianilido-3,6-dichlorobenzoquinone sulfurated). 1.50

1899 PB L 73377 Helindon Brilliant Yellow GF (2'-hydroxy-3'-methylbenzoyl-1-amino-anthraquinone). 1.50

1900-1902 PB L 73377 Helindon Yellow CG (2,5-di-(p-chloroanilino)-1,4-benzoquinone). 1.50

1903 PB L 73377 Helindon Green B (1-chloro-2,3-naphthisatin chloride, condensed with 1,4-dihydroxymonomethyl ether). 1.50

1904-1906 PB L 73377 Helindon Khaki C (sulfurization product of 2,5-dianilido-3,6-dichloro-benzoquinone). 1.50

1907-1908 PB L 73377 Helindon Khaki CR (sulfurization product of 2,5-dianilido-3,6-dichloro-1,4-benzoquinone). 1.50

1909-1911 PB L 73377 Helindon Red CR (2-(p-chloroanilido) -1,4-naphthoquinone). 1.50

1912-1915 PB L 73377 Anthrasol O (disulfuric ester of leuco indigo). 1.50

1916-1919 PB L 73377 Anthrasol O4 B (disulfuric ester of leuco tetrabromoindigo). 1.50

1920 PB L 73377 Anthrasol O4 G (leuco sulfuric ester of Brilliant Indigo 4G (dichloro-dibromo-indigo)). 1.50

1921-1923 PB L 73377 Anthrasol CR (leuco sulfuric acid ester of Indigo MLB/2). 1.50

1924-1926 PB L 73377 Anthrasol AZG (leucosulfuric ester of Algol Blue G). 1.50

1927-1929 PB L 73377 Anthrasol Blue I B C (tetra-sulfuric acid ester of leuco Indanthrene Blue BC). 1.50

1930-1932 PB L 73377 Anthrasol Blue IGC (tetrasulfuric acid ester of leuco 3,3'-dibromo-Indanthrene). 1.50

1933-1935 PB L 73377 Anthrasol Blue Black IRD (leuco sulfuric acid ester of Indanthrene Printing Black BGL). 1.50

1936-1939 PB L 73377 Anthrasol Brown IBR (sulfuric ester of the leuco compound of Indanthrene Brown BR). 1.50

1940-1942 PB L 73377 Anthrasol Brown IRRD (leuco sulfuric ester of Indanthrene Brown RRD). 1.50

1943-1945 PB L 73377 Anthrasol Brown IV D (leuco sulfuric ester of Vat Brown VD). 1.50

1946-1948 PB L 73377 Anthrasol Brilliant Orange IRK (leuco sulfuric ester of Indanthrene Brilliant Orange RK). 1.50

1949-1952 PB L 73377 Anthrasol Brilliant Pink I 3 B (leuco sulfuric ester of Indanthrene Brilliant Pink 3B). 1.50

1953-1955 PB L 73377 Anthrasol Brilliant Violet I 4 R (sulfuric ester of the leuco compound of Indanthrene Brilliant Violet 4 R). 1.50

Dyes (contd)

1956-1958 PB L 73377	Anthrasol Printing Blue IB (leuco sulfuric ester of Indanthrene Printing Blue B).	1.50
1959-1961 PB L 73377	Anthrasol Printing Blue IGG (leuco sulfuric ester of Indanthrene Printing Blue GG).	1.50
1962 PB L 73377	Anthrasol Printing Purple IR (leuco sulfuric ester of Indanthrene Printing Purple R).	1.50
1963-1966 PB L 73377	Anthrasol Printing Black IB (leuco sulfuric ester of Indanthrene Printing Black B).	1.50
1967-1970 PB L 73377	Anthrasol Printing Violet IBBF (leuco sulfuric ester of Indanthrene Printing Violet BBF).	1.50
1971-1973 PB L 73377	Anthrasol Printing Violet IRR (leuco sulfuric ester of Vat Violet 101).	1.50
1974-1976 PB L 73377	Anthrasol Yellow HCG (leuco sulfuric ester of Helindon Yellow CG).	1.50
1977-1979 PB L 73377	Anthrasol Yellow V (leuco sulfuric ester of Yellow BY).	1.50
1980-1982 PB L 73377	Anthrasol Golden Yellow IGK (leuco sulfuric ester of Indanthrene Golden Yellow GK).	1.50
1983-1986 PB L 73377	Anthrasol Golden Yellow IRK (leuco sulfuric ester of Indanthrene Golden Yellow RK).	1.50
1987-1989 PB L 73377	Anthrasol Gray IBL (leuco sulfuric ester of Indanthrene Printing Black BL).	1.50
1990 2000-2001 PB L 73377	Anthrasol Green AB (leuco sulfuric ester of Algol Brilliant Green BK).	1.50
1991-1999 PB L 73377	These frames are missing due to faulty numbering.	
2002-2004 PB L 73377	Anthrasol Green IB (leuco sulfuric ester of Indanthrene Brilliant Green FFB).	1.50
2005-2008 PB L 73377	Anthrasol Green IGG (leuco sulfuric ester of Indanthrene Brilliant Green GG).	1.50
2009-2012 PB L 73377	Anthrasol Green I 3 G (leuco sulfuric ester of Pyrene Green base pure).	1.50
2013-2015 PB L 73377	Anthrasol Olive Green IB (leuco sulfuric ester of Indanthrene Olive Green B).	1.50
2016-2019 PB L 73377	Anthrasol Orange HR (leuco sulfuric ester of Algol Orange RF).	1.50
2020-2024 PB L 73377	Anthrasol Pink I R Extra (sulfuric ester of the leuco compound of Indanthrene Brilliant Pink R Extra).	1.50
2025-2027 PB L 73377	Anthrasol Red IFBB (leuco sulfuric ester of Indanthrene Red FBB).	1.50
2028-2030 PB L 73377	Anthrasol Reddish Violet IRH (leuco sulfuric ester of Indanthrene Red Violet RH).	1.50
2031-2033 PB L 73377	Anthrasol Scarlet IB (leuco sulfuric ester of Indanthrene Scarlet B).	1.50
2034-2036 PB L 73377	Cubana Brown R (dicyclo-hexylamine salt of Sirius Light Brown 3 R).	1.50
2037-2038 PB L 73377	Zapon Fast Blue CGG (monocyclo-hexylamine salt of Amino Black IO B).	1.50
2039-2041 PB L 73377	Zapon Fast Red CB (dicyclohexyl-amine salt of Azo Cerise M).	1.50
2042-2043 PB L 73377	Zapon Fast Scarlet CG (dicyclo-hexylamine salt of Brilliant Crocein).	1.50
2044-2046 PB L 73377	Zapon Fast Scarlet CR (dicyclo-hexylamine salt of Erythrin X).	1.50
2047-2048 PB L 73377	Zapon Yellow 0431 (dicyclohexyla-mine-o-nitraniline sulfonate).	1.50
2049-2051 PB L 73377	Catilan (condensation product of xylene and sulfur chloride).	1.50
2052-2053 PB L 73377	Dermiral fat II (70% leather oil I/90 containing 40% chlorine and 30% chloroparaffin containing 60% chlorine).	1.50
2054-2055 PB L 73377	Dermiral oil I (mixture of 75% leather oil I/90 (chlorokogasin with 40% chlorine) and 25% Igevin J 30 (polymerised vinyl isobutyl ether)).	1.50
2056-2058 PB L 73377	Leather oil I/90 (chlorination product of Kogasin II (aliphatic hydrocarbons of C_{10} - C_{15})).	1.50
2059-2060 PB L 73377	Gelevan /Chlormepasin/ (Chlorinated Mepasin or Kogasin containing 40% chlorine).	1.50
2061-2063 PB L 73377	Hertolan (benzoic-β-naphthol ester).	1.50
2064-2066 PB L 73377	Mitigal (dimethylthianthrene).	1.50
2067-2069 PB L 73377	Vulkazit ZA (diphenylthiourea).	1.50
2070-2071 PB L 73377	Dispersing agent SS (condensation product of cresol and formaldehyde, further condensed with 2-naphthol-6-sulfonic acid).	1.50
2072-2074 PB L 73377	Shoe polish (28% waxes and 72% solvents).	1.50
2075-2077 PB L 73377	Polishing wax (approximately 30% waxes and approximately 70% solvents).	1.50
2078-2079 PB L 73377	Ethoxyorthamine (1-ethoxy-3, 4-diaminobenzene).	1.50
2080-2081 PB L 73377	Aeridon Acid (1-amino-4-(2'-carboxyl-5'-chloro)-anilino-anthraquinone).	1.50
2082-2083 PB L 73377	Alizarin Brown base (mixture of anthragallol and rufigallol).	1.50
2084 PB L 73377	Alizarin Direct Violet E 2 B base (mixture of 1,4-diaminosulfonic acids).	1.50
2085-2087 PB L 73377	Alizarin Pure Blue FFB (1-amino-4-(3'-carboxy-)anilino-anthraquinone-2-sulfonic acid).	1.50
2088-2089 PB L 73377	Alpha Black (5,8-dihydroxy-1,4-naphthoquinone (naphthazarine)).	1.50
2090 PB L 73377	Algol Blue G (dyestuff from 5,7-dibromoisatin and alpha-hydroxy-anthracene).	1.50
2091-2092 PB L 73377	Amido-NT-acid (amino-methyl-diphenyl-methane-carboxylic acid).	1.50
2093-2094 PB L 73377	Aminosulfamide (aminophenol-3-sulfonic-di-hydroxy-ethylamide).	1.50

Dyes (contd)

2095-2097 PB L 73377	Aminoxylsulfone (3-amino-4-methoxybenzyl-3'-carboxyl-4'-hydroxy-phenylsulfone).	1.50
2098-2099 PB L 73377	Aminoethylimid base (3-amino-N-ethylcarbazole).	1.50
2100-2101 PB L 73377	Chloranil (tetrachloroquinone).	1.50
2102-2103 PB L 73377	Anthramethane (product of the reaction between 1-amino-4-bromo-anthraquinone-2-sulfonic acid and 3'-amino-4'-methyl-diphenyl-methane-2-carboxylic acid).	1.50
2104-2105 PB L 73377	Anthramethane free from copper (condensation product of 1-amino-4-bromoanthraquinone-2-sulfonic acid and 3'-amino-4'-methyl-diphenyl-methane-2-carboxylic acid).	1.50
2106-2107 PB L 73377	"Beta-chlorid" (2-naphthalene-sulfonic acid chloride).	1.50
2108-2110 PB L 73377	Blue Isatin (4-methyl-5-chloro-7-methoxy-isatin).	1.50
2111-2115 PB L 73377	"Blausulfochlorid" (m-dichloro-benzene-1-sulfochloride).	1.50
2116-2117 PB L 73377	Braunol (2,1-naphththiophene).	1.50
2118-2119 PB L 73377	Brilliant Flavin base (4-amino-naphthalic anhydride).	1.50
2120-2121 PB L 73377	Brilliant Flavin Acid (4-amino-naphthol-sulfonic acid).	1.50
2122-2123 PB L 73377	Bromatin (5-bromoisatin).	1.50
2124-2126 PB L 73377	Bromgelbsalz (5,7-dibromoisatin).	1.50
2127-2130 PB L 73377	Bromodiester (disulfuric ester of leuco-2-acetamino-3-bromo-anthraquinone).	1.50
2131-2132 PB L 73377	Chlorgelbsalz (5,7-dichloroisatin).	1.50
2133-2134 PB L 73377	Chlor-meta-gelbsalz (4,6-dimethyl-5,7-dichloroisatin).	1.50
2135-2136 PB L 73377	Chloronaphthene (9-chloro-1, 2-naphthothiophene).	1.50
2137-2139 PB L 73377	Chlornitro-benzoeacid pure (2-chloro-4-nitrobenzoic acid).	1.50
2140-2141 PB L 73377	Chloro-orthamine (1-chloro-3, 4-diaminobenzene).	1.50
2142-2143 PB L 73377	Chlorsulfanil (condensation product of chloramino-diphenyl amine sulfonic acid and chloranil).	1.50
2144-2146 PB L 73377	Chrome leather grease H (after-stuffing grease H) composed of 9.8% Derminol grease II 30.4% Derminol fat liquor I 14.9% Leather oil I/90 4.4% Igepon AP, highly concentrated 40.5% water	1.50
2147 PB L 73377	CV preliminary product (2,5-dianilino-3,6-dichloro-1,4-benzoquinone).	1.50
2148-2149 PB L 73377	CT-Sulfochloride (m-chloro-toluene-sulfochloride).	1.50
2150-2152 PB L 73377	Benzoyl peroxide.	1.50
2153-2155 PB L 73377	DE-Naphthene (5,7-dichloro-hydroxythionaphthene).	1.50
2156-2157 PB L 73377	Diacen (dinitro-acenaphthene (mixture of isomers)).	1.50
2158-2160 PB L 73377	Di-ester (disulfuric ester of leuco-2-acetamino-3-chloroan-thraquinone).	1.50
2161-2162 PB L 73377	Dikstimide (condensation product of acenaphthene and malonic dinitrile).	1.50
2163-2164 PB L 73377	Fluoranil (diaminofluorenyl-dichloroquinone).	1.50
2165-2166 PB L 73377	Fluorenit (2-nitrofluorene).	1.50
2167-2169 PB L 73377	Gray Anthrimide and Gray Anthrimide MG (anthraquinonyl-amino-benzanthronyl-pyrazol-anthrone).	1.50
2170-2171 PB L 73377	Gray Base (anilino-amino-naphtho-quinoneimine).	1.50
2172-2174 PB L 73377	G 2 R Thio-acid (beta-naphthyl-thioglycolic acid).	1.50
2175-2177 PB L 73377	Homazol (o-toluene-5,6,1-hydroxy-naphthocarbazole).	1.50
2178-2180 PB L 73377	Hydroimide, crude (hydrocyano carbodiphenylimide).	1.50
2181-2183 PB L 73377	Hydroimide, pure (hydrocyano carbodiphenylimide).	1.50
2184 PB L 73377	Indandion (dichloro-periace-naphthene indandione).	1.50
2185 PB L 73377	Indanthrene Printing Blue B (condensation product of 5,7-dichloro-thionaphthene and 4-methyl-5-chloro-7-methoxyisatin).	1.50
2186 PB L 73377	Indanthrene Printing Blue R base (product of 4-chloro-2-naphthol and 4-methyl-5-chloro-7-methoxyisatin).	1.50
2187-2189 PB L 73377	Indanthrene Printing Brown 3 R base (condensation product of 5-chloro-7-methylisatin and naphthothiophene).	1.50
2190 PB L 73377	Indanthrene Printing Brown 5R (condensation product of naphthalene-1,4,5,8-tetracarboxylic acid and 1-chloro-3,4-diaminobenzene).	1.50
2191 PB L 73377	Indanthrene Printing Brown B (condensation product of 1,4,5,8-naphthalene-tetracarboxylic acid and ethoxy-1,2-phenylenediamine).	1.50
2192 PB L 73377	Indanthrene Yellow RFRK Base (2,2'-dianthrimide carbazole).	1.50
2193-2196 PB L 73377	Indanthrene Yellow 3 RT and 3 R Crude Base (1,5-trianthrimide carbazole).	1.50
2196-2198 PB L 73377	Indanthrene Golden Yellow GK Base T (3,4,8,9-dibenzopyrene-5,10-quinone).	1.50
2199-2200 PB L 73377	Indanthrene Golden Yellow RK (brominated dibenzopyrene-quinone).	1.50
2201-2203 PB L 73377	Isatin TX (acenaphthenequinone).	1.50

Dyes (contd)

2204-2207 PB L 73377	Isatinanilide (isatin-β-anilide)	1.50
2208-2210 PB L 73377	Isonitroso for Blue Isatin (5-methyl-6-methoxy-isonitroso-acetanilide).	1.50
2211-2212 PB L 73377	Indanthrene Scarlet GG Base P (condensation product of "tetra acid" and o-diaminobenzene).	1.50
2213-2214 PB L 73377	Carboxazin (dioxazine from dichloro-diamino-carbazyl-quinone).	1.50
2215-2216 PB L 73377	Kogasin chloride 52 (chlorinated Kogasin II (aliphatic hydro-carbons C10-C15 of the Fischer-Tropsch synthesis with 52% chlorine).	1.50
2217 PB L 73377	Solution of cuprous chloride.	1.50
2218-2219 PB L 73377	"Leucopyranil" (dipyrenylamino-dichlorohydroquinone).	1.50
2220 PB L 73377	m-Chlorotoluene.	1.50
2221 PB L 73377	m-Dichorobenzene.	1.50
2222-2223 PB L 73377	Malonitrile (malonic acid dinitrile).	1.50
2224-2225 PB L 73377	MM-Isatin (4-methyl-7-methoxyisatin).	1.50
2226-2228 PB L 73377	Naphthazarine intermediate (amino-hydroxy-naphthoquinoneimine double salt with zinc chloride).	1.50
2229-2231 PB L 73377	Naphthiol acid (1,8-naphthalene-thioglycollic acid).	1.50
2232-2234 PB L 73377	Caustic soda - starch preparation.	1.50
2235-2236 PB L 73377	Nitracen (5-nitroacenaphthene).	1.50
2237-2238 PB L 73377	Nitralide (4-nitronaphthalic anhydride).	1.50
2239-2240 PB L 73377	Nitro-ethylimide Base (3-nitro-N-ethylcarbazole).	1.50
2241-2242 PB L 73377	Nitro-T-acid (nitro-methyl-benzophenone-carboxylic acid).	1.50
2243-2244 PB L 73377	Nitrosulfamide (nitrophenylsulfonic acid-dioxethylamide).	1.50
2245-2246 PB L 73377	Nitroxyl sulfone (3-nitro-4-methoxy-benzyl-3'-carboxy-4'-hydroxy-phenylsulfone).	1.50
2247-2248 PB L 73377	Nitroxychloride (3-nitro-4-methoxy-benzyl chloride).	1.50
2249-2251 PB L 73377	Orthamine (1,2-diaminobenzene).	1.50
2252-2254 PB L 73377	o-Thioacid (phenylthioglycol-o-carboxylic acid).	1.50
2255-2256 PB L 73377	"o-Thio acid melt" (hydroxy-thionaphthene carboxylic acid).	1.50
2257-2258 PB L 73377	Oxazine intermediate product P (2,5-dichloro-3,6-di-(m-methyl-carbazoleamino)-1,4-benzoquinone).	1.50
2259 PB L 73377	"Oxazine intermediate S" (condensation product of chloranil and 3-amino-N-ethylcarbazole).	1.50
2260 PB L 73377	Hydroxy-quinaldine-carboxylic acid (3-hydroxy-quinaldine-4-carboxylic acid).	1.50
2261-2262 PB L 73377	Penta meal (tetraanthraquinonyl tetraaminoanthraquinone).	1.50
2263-2264 PB L 73377	Pigment Past Violet R Base (di-(N-ethylcarbazylamino-)-dichloro-quinone).	1.50
2265-2266 PB L 73377	"Pyram" (aminopyrene).	1.50
2267-2268 PB L 73377	Pyranil crude (dipyrenylamino-dichloroquinone).	1.50
2269-2270 PB L 73377	Pyranil pure (dipyrenylamino-dichloroquinone).	1.50
2271-2272 PB L 73377	Pyrenit S (nitropyrene).	1.50
2273-2275 PB L 73377	Pyrene quinone (1,3,6,8-tetra-chloropyrene-5,10-quinone).	1.50
2276-2277 PB L 73377	Pyroxazin (dioxazine of the condensation product of chloranil and 3-aminopyrene).	1.50
2278-2280 PB L 73377	Pyrene Green Crude (2,7-dianilino-5, 10-dichloro-3, 8-pyrenequinone).	1.50
2281-2282 PB L 73377	Pyrene Green Pure (2,7-dianilino-5, 10-dichloro-3, 8-pyrenequinone).	1.50
2283-2284 PB L 73377	Pyron (benzanthronyl-pyrazole-anthrone).	1.50
2285-2286 PB L 73377	Perchlorpyrene (tetrachloropyrene tetrachloride).	1.50
2287-2288 PB L 73377	Starch mixture dry (addition product of caustic soda for potato starch).	1.50
2289 PB L 73377	Starch mixture moist (moist addition product of caustic soda for potato starch).	1.50
2290-2292 PB L 73377	Pyrenchlorid (hexachloropyrene).	1.50
2293 PB L 73377	Tetrachloro-dehydro-indigo hydro-chloride.	1.50
2294-2296 PB L 73377	Tetra acid (naphthalene-1, 4,5,8-tetracarboxylic acid).	1.50
2297-2299 PB L 73377	Thio-3B-acid (4-chloro-2-methyl-phenyl-thioglycollic acid).	1.50
2300-2302 PB L 73377	Thio-3B-acid new (4,2-chloromethyl phenyl-thioglycollic acid).	1.50
2303-2305 PB L 73377	Transketone (1,5-bibenzoyl-naphthalene).	1.50
2306-2307 PB L 73377	Tri meal (dianthraquinonyl-diaminoanthraquinone).	1.50
2308-2310 PB L 73377	Trichloroparaffin.	1.50
2311-2313 PB L 73377	Sulfacridone acid (1-amino-4-(2'-carboxy-5'-chloro)-anilino-anthraquinone-2-sulfonic acid).	1.50
2314-2315 PB L 73377	Sulfanil (condensation product of amino-diphenylaminosulfonic acid and chloranil).	1.50
2316-2317 PB L 73377	Dehydrated vegetables for the plant's kitchen.	1.50
2318-2320 PB L 73377	Vegetables and fruits frozen with nitrous oxide, for the plant's kitchen.	1.50
2321-2322 PB L 73377	Index, chemical composition, sources of supply, and consumption figures of various products manufactured in the Alizarin department of I. G. Farbenindustrie A. G.	1.50

Dyes (contd)

2323-2324 PB L 73377	Redissolving of dyestuff bases from sulfuric acid.	1.50
2325 PB L 73377	List of utilities such as coal, water, electricity, and gas used in 1937-1944.	1.50
2326 PB L 73377	Index, sources of supply, and consumption of figures of various products manufactured in the Alizarin department of I. G. Farbenindustrie A. G.	1.50
2327-2333 PB L 73377	Index, chemical composition, and production figures of various products manufactured in the intermediate products department of I. G. Farbenindustrie A. G. in the years 1937-1944.	1.50
2334-2336 PB L 73377	"Acet-dinitramin P moist and dry" (aceto-dinitroaniline) (1-acetamino-2,4-dinitrobenzene).	1.50
2337-2340 PB L 73377	Acetoacetic-acid-anilide (acetoacetyl-1-aminobenzene).	1.50
2341-2344 PB L 73377	Acetoacetamide, N-benzyl.	1.50
2345-2347 PB L 73377	Acetoacetic acid-o-chloroanilide (acetoacetyl-1-amino-2-chloro-benzene).	1.50
2348-2350 PB L 73377	Acetoacetic - orthoside (acetoacetyl-1-amino-2-methoxybenzene).	1.50
2351-2353 PB L 73377	Acetoacetylorthotoluide (acetoacetyl-1-amino-2-methylbenzene).	1.50
2354-2356 PB L 73377	Acetoacetic acid -m-xylidide (acetoacetyl-1-amino-2,4-dimethyl benzene).	1.50
2357-2360 PB L 73377	2-Hydroxyethane sulfonic acid (sodium salt).	1.50
2361 PB L 73377	Ethyl acid (ethylsulfuric acid).	1.50
2362-2364 PB L 73377	Sodium salt of ethylsulfuric acid.	1.50
2365-2367 PB L 73377	Sodium salt of ethanesulfinic acid.	1.50
2368-2370 PB L 73377	Amido BB (1-(3-aminobenzenesulfamino)-benzene-2-carboxylic acid).	1.50
2371-2374 PB L 73377	Amido-1-pyrazolone (1-naphthyl-2, 3-methyl-5-pyrazolone-5,7-disulfonic acid).	1.50
2375-2377 PB L 73377	Amido-1-acid hydrazine (2-hydrazino-naphthalene-5,7-disulfonic acid).	1.50
2378-2381 PB L 73377	Amidol acid (1-amino-2-naphthol-4-sulfonic acid).	1.50
2382-2385 PB L 73377	Aniline.	1.50
2386-2388 PB L 73377	Benzenesulfonyl chloride.	1.50
2389-2391 PB L 73377	Benzenesulfamide.	1.50
2392-2393 PB L 73377	Benzene forerun S (mixture of low-boiling hydrocarbons with carbon disulfide and benzene).	1.50
2394-2396 PB L 73377	Benzoyl-acetic-ester (benzoylacetic acid, ethylester).	1.50
2397-2401 PB L 73377	Blue Base F (4'-methoxy-4-aminodiphenylamine (hydrochloride or sulfate), mol. wt. 214.	1.50
2402-2405 PB L 73377	Blue Base F G (4-amino-3-methoxy diphenylamine).	1.50
2406-2407 PB L 73377	m-Methoxydiphenylamine.	1.50
2408-2410 PB L 73377	Broenner acid hydrazine (2-hydrazino-naphthalene-6-sulfonic acid).	1.50
2411-2413 PB L 73377	Broenner Acid Pyrazolone (1-naphthyl-(2')-3-methyl-5-pyrazolone-6'-sulfonic acid).	1.50
2414-2416 PB L 73377	Carbethoxypyrazolone (1-phenyl-5-pyrazolone-3-carboxylic acid, ethyl ester).	1.50
2417-2419 PB L 73377	Carbethoxy-pyrazole-acid 4 (1-(4'-sulfophenyl)-5-pyrazolone-3-carboxylic acid ethyl ester).	1.50
2420-2422 PB L 73377	Carboxypyrazolone (1-phenyl-5-pyrazolone-3-carboxylic acid).	1.50
2423-2425 PB L 73377	Carboxy-pyrazole-acid 2 (1-(2'-sulfophenyl)-5-pyrazolone-3-carboxylic acid).	1.50
2426-2428 PB L 73377	Carboxy-pyrazole-acid 4 (1-(4'-sulfophenyl)-5-pyrazolone-3-carboxylic acid).	1.50
2429-2431 PB L 73377	C A - acid (2-chloro-5-amino-4-sulfobenzoic acid).	1.50
2432-2433 PB L 73377	Chloral.	1.50
2434-2436 PB L 73377	Chlorobenzene in mixture with some dichlorobenzene and with 40-50% of benzene (case a) or with 4-7% of benzene (case b).	1.50
2437-2439 PB L 73377	m-Chlorobenzotrifluoride.	1.50
2440 PB L 73377	o-Chlorobenzotrifluoride.	1.50
2441-2442 PB L 73377	p-Chlorobenzotrifluoride.	1.50
2443-2445 PB L 73377	5-Chloro-1-diazo-2-naphthol-4-sulfonic acid.	1.50
2446-2449 PB L 73377	2-Chloro-phenylhydrazine-5-sulfonic acid.	1.50
2450-2454 PB L 73377	2-Chloro-5-toluidine-4-sulfonic acid.	1.50
2455-2457 PB L 73377	Chloro-methyl-carbethoxy-pyrazole acid 624 (1-(6'-chloro-2'-methyl-4'-sulfophenyl)-5-pyrazolone-3-carboxylic acid, ethyl ester).	1.50
2458-2460 PB L 73377	Chloromethylpyrazole acid 624 (1-(6'-chloro-2'-methyl-4'-sulfophenyl)-3-methyl-5-pyrazolone).	1.50
2461-2462 PB L 73377	Chloro-o-nitraniline moist reprecipitated (4-chloro-2-nitro-1-aminobenzene).	1.50
2463-2464 PB L 73377	3-Chloro-2-toluidine-5-sulfonic acid.	1.50
2465-2467 PB L 73377	Chloro-toluidine acid pure (3-chloro-2-amino-1-methylbenzene-5-sulfonic acid).	1.50
2468-2470 PB L 73377	Chlorparaminsäure (4'-chloro-4-aminodiphenylamine-2-sulfonic acid).	1.50
2471-2473 PB L 73377	Chloropyrazole acid 5 (1-(2'-chloro-5-sulfophenyl)-3-methyl-5-pyrazolone).	1.50

Dyes (contd)

2474-2476 PB L 73377 — "Chlorosulfocarboxylic acid 24" (2-chloro-4-sulfobenzoic acid). — 1.50

2477 PB L 73377 — Chlorotoluidine 32 (3-chloro-2-toluidine). — 1.50

2478-2484 PB L 73377 — 5-Chloro-2-toluidine. — 1.50

2485-2486 PB L 73377 — m-Chlorotoluene free from iron, distilled. — 1.50

2487-2489 PB L 73377 — m-Chlorotoluene (3-chloro-1-methylbenzene). — 1.50

2490-2491 PB L 73377 — o-Chlorotoluene free from iron, distilled (2-chloro-1-methylbenzene). — 1.50

2492-2493 PB L 73377 — p-Chlorotoluene free from iron, distilled (4-chloro-1-methylbenzene). — 1.50

2494-2496 PB L 73377 — Chlorotoluene-para-acid (sodium 2-chlorotoluene-4-sulfonate, mol. wt. 206.5. — 1.50

2497-2500 PB L 73377 — Chlorotolyl hydrazine acid 5 (6-chloro-2-methylphenylhydrazine-4-sulfonic acid). — 1.50

2501-2503 PB L 73377 — Diethyl sulfate (sulfuric diethylester). — 1.50

2504-2506 PB L 73377 — Diethyl sulfate prepared from ethylene and 100% H_2SO_4 (sulfuric acid diethylester). — 1.50

2507-2508 PB L 73377 — Diazoamidol acid (1-amino-2-naphthol-4-sulfonic acid diazotized, mol. wt. 250). — 1.50

PB L 73377-S. I. G. FARBENINDUSTRIE A. G., FRANKFURT/MAIN-HÖCHST, GERMANY. Manufacturing reports on dyes and dye intermediates. (FIAT Microfilm Reel CC 124, Frames 1853-2508, abstract cards). 1941-1945. 194 p. Price: Microfilm-$6.00 - Photostat-$20.00
Brief abstracts of the individual items on the above reel CC 124 (PBL 73377), prepared by FIAT personnel in Germany.

PB L 25626. I. G. FARBENINDUSTRIE A.G. Methods for production of dyestuffs as disclosed through T.E.A. Büro documents. (Continued from Reel C 185, PB 25625). (FIAT Reel C 186 (Frames 1101-2207) 16 mm microfilm). 1932-1939. 1107 f. Price: Microfilm-$6.00 - Enlargement print-$111.00
This reel (FIAT Reel C 186) consists of complete directions for the production of about 400 dyes and intermediates. In most cases the directions include structural formulas or correct chemical names for the intermediates. The directions for the individual dyes are briefly abstracted below. A short abstract of this reel was given in the Bibliography in Vol. 6, p. 471. In German.

PB L 67281. JOINT INTELLIGENCE OBJECTIVES AGENCY. Manufacturing methods of preparation of dyestuffs, as disclosed through T.E.A. Büro documents. (Continued from Reel C-185, PB 25625). (Enlargement Print Index of FIAT Reel C-186, PB 25626). Apr 1946. 17 p. Price: Microfilm-$1.00 - Photostat-$2.00
This index lists the names of the dyes and intermediates for which production directions are given in PB 25626 above, together with their PB numbers and frames on which each appears on the reel.

PB L 67446. I. G. FARBENINDUSTRIE A.G. Direction for producing "Columbia-echtschwarz G extra". (TEA-Büro-Report). (Enlargement Print of Frames 1101-1102 of FIAT Microfilm Reel C 186, PB 25626). May 1935. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
This document gives complete directions for producing about 2500 kilograms of the dye. Chief ingredient is p-nitraniline and H-acid. In German.

PB L 67445. I. G. FARBENINDUSTRIE A. G. "Saturngelb CC." (TEA-Büro-Report). (Enlargement Print of Frames 1103-1104 of FIAT Microfilm Reel C 186, PB 25626). Mar 1934. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
Complete directions for producing 262 kg of this dye are given, starting with 3-chloro-2-toluidine. Its chemical structure is described as being 2'-methyl-6'-chloro-4'-sulfo-1-phenyl-5-pyrazolone-3-carboxylic acid ethyl ester. In German.

PB L 67444. VOSS. "Phosphin E." (I. G. Farbenindustrie - TEA-Büro-Report). (Enlargement Print of Frames 1105-1107 of FIAT Microfilm Reel C 186, PB 25626). Mar 1937. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
Complete directions are given for the production of (1) p-aminobenzaldehyde, (2) "Phosphin E" for which (1) is a starting material. Other chief ingredients are phenyl-m-toluylene diamine and .2,4-dinitrotoluene. In German.

PB L 67443. NAVIASKY. Production of "Heliogenblau B." (I. G. Farbenindustrie - TEA-Büro-Report). (Enlargement Print of Frames 1108-1138 of FIAT Microfilm Reel C 186, PB 25626). Aug 1939. 31 p. Price: Microfilm-$1.00 - Photostat-$3.00
This folder contains several sets of directions for producing "Heliogenblau B", "G", and "NCB", also "Siriuslichtärkisblau G" (Heliogenblau SBL) and "Vulcanechtblau 5 G". "Heliogenblau B" is explained to be a copper phthalocyanine, "Heliogenblau G" a metal-free phthalocyanine. In German.

PB L 67442. I. G. FARBENINDUSTRIE A. G. Directions for producing "Heliogengrün G" crude lumps. (TEA-Büro-Report). (Enlargement Print of Frames 1139-1146 of FIAT Microfilm Reel C 186, PB 25626). Apr 1939. 8 p. Price: Microfilm-$1.00 - Photostat-$1.00
A complete description of the process is given, the essential feature being chlorination of "Heliogenblau B" powder. Added are directions for producing from the crude product "Heliogengrün G" paste, and questions and answers further explaining the process. In German.

PB L 67441. ANGERMUDER. Directions for producing phthalodinitrile. (TEA-Büro-Report). (I. G. Farbenindustrie). (Enlargement Print of Frames 1147-1154 of FIAT Microfilm Reel C 186, PB 25626). Aug 1936. 8 p. Price: Microfilm-$1.00 - Photostat-$1.00
This substance is produced by the reaction of ammonia and phthalic anhydride in the gaseous phase in the presence of a bauxite catalyst. The bauxite used, from Upper Hesse, contains much iron. The apparatus used is described; improvements are suggested in an appendix. The process is described in detail. The yield is about 94% of the theoretical. Analysis of a sample is also described. In German.

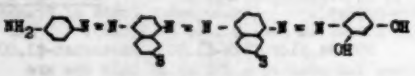
PB L 67440. WIEDEMANN. "Solaminorange 2 RL". (TEA-Büro-Report). (I. G. Farbenindustrie). (Enlargement Print of Frame 1155 of FIAT Microfilm Reel C 186, PB 25626). Oct 1936. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
Directions for about 2000 kilograms of a paste of this dye are given. It is indicated that the yield was not fully satisfactory. In German.

PB L 67439. I. G. FARBENINDUSTRIE A. G. "Benzoformbordeaux B". (TEA-Büro Report). (Enlargement Print of Frames 1156 of FIAT Microfilm Reel C 186, PB 25626). Jul 1912-Oct 1938. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
Brief directions for the preparation of this dye from benzidinemonosulfonic acid and resorcinol are given. In German.

Dyes (contd)

PB L 67438. I. G. FARBENINDUSTRIE A. G. "Benzoformblau BBL". (TEA-Büro-Report). (Enlargement Print of Frames 1157-1162 of FIAT Microfilm Reel C 186, PB 25626). Sep 1938. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00

This dye



is produced from "oxalylparamine", Cleve-7-acid, and resorcinol. Brief information on a standard report form, and two sets of detailed directions are given, one of these for production of 600 kilograms of paste, the other for about 1300 kg. In German.

PB L 67437. SCHUBERT. "Benzoformbraun R." (TEA-Büro Report). (I. G. Farbenindustrie). (Enlargement Print of Frames 1163-1164 of FIAT Microfilm Reel C 186, PB 25626). Oct 1938. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00

This dye is produced from "paranine urea", (4,4' aminocarbanilide), gamma acid, and resorcinol. Brief instructions are given on a standard report form, and more detailed directions are added. In German.

PB L 67436. SCHUBERT. "Benzoformrot G." (TEA-Büro-Report). (I. G. Farbenindustrie). (Enlargement Print of Frames 1165-1167 of FIAT Microfilm Reel C 186, PB 25626). Oct 1938. 3 p. Price: Microfilm-$1.00-Photostat-$1.00

Brief information on preparation is given on a standard report form. A detailed description of the process is added, including tests to be carried out at the various stages of production. In German.

PB L 67435. I. G. FARBENINDUSTRIE A. G. "Benzoformviolett B". (TEA-Büro-Report). (Enlargement Print of Frames 1168-1168a of FIAT Microfilm Reel C 186, PB 25626). Jul 1912-Oct 1938. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00

This dye is prepared from dianisidine, cyanic acid, and resorcinol. In addition to short information on a standard form, a step-by-step description of the process is given. In German.

PB L 67434. ROOS. Method for preparing "Benzoformbraun 8075". (TEA-Büro Report). (I. G. Farbenindustrie). (Enlargement Print of Frames 1169-1171 of FIAT Microfilm Reel C 186, PB 25626). Nov 1936. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00

Detailed directions are given for preparing a small amount (2,300 grams) of this dye. Starting materials are p-animobenzoyl-p-phenylenediamine, salicylic acid, and gamma acid. In German.

PB L 67433. HILGER. Process for producing "Chromlederechtschwarz S conc. F". (TEA-Büro-Report). (I. G. Farbenindustrie). (Enlargement Print of Frames 1172-1173 of FIAT Microfilm Reel C 186, PB 2562). Jun 1937. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00

This dye is produced from benzidine, H acid, p-sulfanilic acid, and diethyl-m-aminoacetanilide. Detailed and complete directions for the production of 4,600 kilograms paste (1,900 kg. dry) are given. In German.

PB L 67432. I. G. FARBENINDUSTRIE A. G. "Tuscalinorange GN". (TEA-Büro-Report). (Enlargement Print of Frames 1174-1175 of FIAT Microfilm Reel C 186, PB 25626). Sep 1937. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00

Complete directions for the production of 1000 kilograms paste = 150 kg powder of this dye are given. It is prepared from 5-chloro-2-nitroaniline and β-naphthol. In German.

PB L 67431. I. G. FARBENINDUSTRIE A. G. "Melegnanoschwarz" (identical with "Chromgrün Rhß). (TEA-Büro Report). (Enlargement Print of Frames 1176 of FIAT Microfilm Reel C 186, PB 25626). Jun 1938. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00

Detailed instructions for the production of 4000 kilograms of a paste of this dye are given. In German.

PB L 67430. I. G. FARBENINDUSTRIE A. G. Process for producing "Diamineralblau CVB." (TEA-Büro-Report). (Enlargement Print of Frames 1177-1182 of FIAT Microfilm Reel C 186, PB 25626). Aug 1938-Jan 1939. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00

The first page in this folder contains directions for producing 7,200 kilograms of a paste of the dye named in the title. On the pages following, the production of similar amounts of "Benzokupferblau B," "Benzokupferblau BC", and "Brilliantkupferblau BW 40" are described in detail. In German.

PB L 67429. I. G. FARBENINDUSTRIE A. G. Process for producing "Full acid gelb R" (Ciba). (TEA-Büro Report). (Enlargement Print of Frame 1183 of FIAT Microfilm Reel C 186, PB 25626). Aug 1938. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00

Detailed directions are given with required amounts of the starting materials (o-chloroamiline and "pyrasolic acid"). Thereby 867 kilograms of the standard type of this dye are produced. In German.

PB L 67428. I. G. FARBENINDUSTRIE A. G. Process for producing "Thioflavin TCN". (TEA-Büro Report). (Enlargement Print of Frames 1184-1186 of FIAT Microfilm Reel C 186, PB 25626). Feb 1939. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00

Detailed directions explain the production of about 800 kilograms of this product. The essential feature of the process is the reaction of "dehydro-thio-p-tolindine" (2,-(p-aminophenyl)-5 methyl-benzothiazole) with methanol and hydrochloric acid. Thereby the free aminogroup is dimethylated, and a molecule of methylchloride is added on the thiazole nitrogen. In German.

PB L 67427. SCHUBERT. Method for producing "Anthralanrot B". (I. G. Farbenindustrie A. G.). (TEA-Büro Report). (Enlargement Print of Frame 1187 of FIAT Microfilm Reel C 186, PB 25626). Feb 1940. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00

Detailed directions are given for the production of about 2,200 kilograms of a paste of this dye. Chief starting materials are o-aminodiphenylsulfone and gamma acid. In German.

PB L 67426. I. G. FARBENINDUSTRIE A. G. Direction for technical production of o-nitro diphenyl sulfone. (TEA-Büro Report). (Enlargement Print of Frames 1188 of FIAT Microfilm Reel C 186, PB 25626). Feb 1940. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00

Starting materials are benzene sulfinic acid and o-dinitrobenzene in alcohol. The process is described. Yield is about 85 % of the theoretical. In German.

PB L 67425. I. G. FARBENINDUSTRIE A. G. Direction for technical production of O-aminodiphenylsulfone. (TEA-Büro Report). (Enlargement Print of Frame 1189 of FIAT Microfilm Reel C 186, PB 25626). Feb 1940. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00

The reduction of 500 kilograms of o-nitro-diphenylsulfone (obtained as described in PB 67426), extraction and isolation of the product are described. The yield of crude 2-aminodiphenylsulfone is 95.5% of the theoretical. In German.

PB L 67424. I. G. FARBENINDUSTRIE A. G. Direction for the production of "F.W. Aethylviolett BOO". (TEA-Büro

Dyes (contd)

Report). (Enlargement Print of Frames 1190-1193 of FIAT Microfilm Reel C 186, PB 25626). Sep 1930. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
Complete directions for producing 580 kilograms of this dye are given. Chief starting materials are diethyl aniline and phosgene. In German.

PB L 67423. I. G. FARBENINDUSTRIE A. G. "Alkaliechtgrün 10 G". (TEA-Büro Report). (Enlargement Print of Frames 1194-1198 of FIAT Microfilm Reel C 186, PB 25626). Jan 1931. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
Complete directions for the production of this dye are given. They include the preparation of ethylbenzyl-m-tolindine-sulfonic acid, its condensation with o-chloro-benzaldehyde, and oxidation with lead dioxide. Attached are older directions for making "Alkaliechtgrün base 2 BF". In German.

PB L 67422. I. G. FARBENINDUSTRIE A. G. "Astraphloxin F F extra." (TEA-Büro Report). (Enlargement Print of Frames 1199-1205 of FIAT Microfilm Reel C 186, PB 25626). Mar 1931. 7 p. Price: Microfilm-$1.00 - Photostat-$1.00
This dye is produced by condensation of two molecules of "trimethyl base" (1,3,3-trimethyl-2-methylene indoline) with one molecule of sodium formate, by means of acetic anhydride. The apparatus needed is described and shown in drawings, and the process is described step by step. Directions for preparing the sodium formate are added. In German.

PB L 67421. I. G. FARBENINDUSTRIE A. G. Direction for producing various blue dyes. (TEA-Büro Report). (Enlargement Print of Frames 1206-1247h of FIAT Microfilm Reel C 186, PB 25626). Sep 1930-Apr 1938. 50 p. Price: Microfilm-$1.00 - Photostat-$4.00
Description of a number of processes have been combined in this folder. The following is a list of the dyes dealt with, with indication of the principal ingredients for making each: "Baumwollblau R extra A" from dimethylanilin and β-naphthol. "Alkaliblau 4 extra A" from "Blau II T-base" (see below). "Alkaliblau 31225L" new, from its base (not further disclosed). "Blau I" from "Nitrosogrün8l" (N-ethyl-N-benzyl-p-quinoniminoimonium chloride) and phenyl-β-naphthylamine. "Blau II" from "Blau I" (see above), nitrosodiethylanilin and amino diethyl aniline. "Blau I and II" are intermediates for "Indocyanine B". "p-Rosanilin" from p-aminobenzaldehyde (directions for this also given) and aniline, or from aniline, p-toluidine, nitrobenzene, and p-nitrotoluene. "Rosanilin A" like above, except that a mixture of aniline and o-toluidine is used. "Seidenblau BTSB" from "Blaubase γ" which is produced from "p-Rosanilin" (see above) and aniline. "Spritblau", similar to "Blaubase γ". "Blaubase γ extra", "Blau II T base", "Blaubase RA": All similar, from varying amounts of "p-Rosanilin" and aniline. From these, several "Wasserblau" and similar dyes: "Lichtblau superfein" (water soluble), "Wasserblau IN", "Opalblau" "Blau BSC", "Wasserblau R" "Wasserblau TR", "Bronzeblau G extra" and "Bronzeblau R extra". "Tintenblau BJ TEE 80" is produced by sulfonation of a mixture of two "Spritblau", one more greenish ("Blau II", soluble in alcohol), one more reddish ("Blau R", soluble in alcohol). These 2 likewise are produced from aniline and "Rosanilin". Frame 1235, containing only a few lines, is illegible. In German.

PB L 67420. I. G. FARBENINDUSTRIE A. G. Lead dioxide. (TEA-Büro Report). (Enlargement Print of Frames 1248-1250 of FIAT Microfilm Reel C 186, PB 25626). Nov 1930. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
The Ludwigshafen method for producing 100% lead dioxide is described. It consists in oxidation of lead acetate by means of sodium hypochlorite. By a similar method, lead sulfate is regenerated to lead dioxide. In German.

PB L 67419. WINTER. Method for preparing "Brillant Alizarinblau". (TEA-Büro Report). (I. G. Farbenindustrie). (Enlargement Print of Frames 1251-1259 of FIAT Microfilm Reel C 186, PB 25626). Feb 1926-Dec 1932. 9 p. Price: Microfilm-$1.00 - Photostat-$1.00
Experiments are described the purpose of which was the improvement of the processes for "Brillant Alizarinblau G" and "R". The new methods had not yet been introduced in practice. Attached are, a description of the apparatus and process for "Brillant Lackblau G extra", and a report on experiments for better solubility of that dye. In German.

PB L 67418. I. G. FARBENINDUSTRIE A. G. Directions for producing "Cyanol extra". (TEA-Büro Report). (Enlargement Print of Frames 1260-1272 of FIAT Microfilm Reel C 186, PB 25626). Jun 1932. 13 p. Price: Microfilm-$1.00 - Photostat-$1.00
Complete directions are given for producing "Cyanol extra" and "Cyanol FF" from benzaldehyde-2,4 disulfonic acid and monoethyltoluidine, and "Cyanol FFG" from benzaldehyde-2,4-disulfonic acid and monobutyltoluidine. The legibility of this item is not very good, and it will reproduce poorly. In German.

PB L 67416. I. G. FARBENINDUSTRIE A. G. Method for producing benzaldehyde-2,4-disulfonic acid. (TEA-Büro Report). (Enlargement Print of Frames 1273-1281, 1295-1302 of FIAT Microfilm Reel C 186, PB 25626). Feb 1928-Jun 1934. 17 p. Price: Microfilm-$1.00 - Photostat-$2.00
Three sets of directions for the production of this substance are contained in this folder. The latest one (of 1934) differs by an improved method for the oxidation of toluene disulfonic acid, which is described in great detail. Also included here is the description of a new process for "Patentblau AF" lenco acid, prepared from benzoldehyde-2,4-disulfonic acid and ethylbenzylaniline and description of the oxidation of leuco acid "VF" to the dye. In German.

PB L 67417. I. G. FARBENINDUSTRIE A. G. "Patentblau VF". (TEA-Büro Report). (Enlargement Print of Frames 1282-1294 of FIAT Microfilm Reel C 186, PB 25626). Jun 1932. 12 p. Price: Microfilm-$1.00 - Photostat-$1.00
Detailed and complete directions describe the processes and equipment for "Patentblau AF" and "Patentblau VF". The former is made from benzaldehyde-2,4-disulfonic acid and ethylbenzylaniline (see also PB 67416 above); the latter uses diethylaniline. In German.

PB L 67415. I. G. FARBENINDUSTRIE A. G. Directions for producing manganese dioxide, alkaline, from manganese sulfate and potassium permanganate. (TEA-Büro Report). (Enlargement Print of Frames 1303-1305 of FIAT Microfilm Reel C 186, PB 25626). n. d. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
Detailed directions for the process described in the title are given. Attached is a description for preparing manganese sulfate solution, for above process, from waste pyrolusite or low-grade manganese dioxide, with sulfur dioxide. In German.

PB L 67414. SCHMID, H. and others. Production of "Brillant Reinblau". (TEA-Büro Report). (I. G. Farbenindustrie A. G.). (Enlargement Print of Frames 1309-1343 of FIAT Microfilm Reel C 186, PB 25626). 1929-Feb 1932. 34 p. Price: Microfilm-$1.00 - Photostat-$3.00
Descriptions of processes for various blue dyes have been combined in this folder. The dyes, and the chief ingredients for producing them, follow: "Brillant Reinblau 8 GZ", from "p-Rosanilin" and β-naphthyl-amines. "Brillant säureblau B", from monobenzyl-o-toluidine and o-chlorobenzaldehyde. "Brillantsäureblau BO" or "Patentblau AE", from o-sulfobenzaldehyde and ethylbenzylaniline sulfonic acid. "Brillantwollblau FFB extra" from "Säuregrün G" (from ethylbenzyl-m-toluidine, benzaldehyde and aniline). "Brillantwollblau FFR extra" from diethylaniline, ethylbenzyl-m-toluidine, and formaldehyde. "Patentblau V" or "Xylenblau V" from benzaldehyde-disulfonic acid and ethylbenzylaniline. In German.

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PB L 67413. I. G. FARBENINDUSTRIE A. G. Method for producing "Euchrysin". (TEA-Büro-Report). (Enlargement Print of Frames 1344-1348 of FIAT Microfilm Reel C 186, PB 25626). Sept 1930. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
Directions for the production of "Euchrysin 2GNX" from 2,4-toluene diamine and acetaldehyde are given in detail. Directions are also given for "Euchrysin 3RX" prepared from "Nitromethanbase". In German.

PB L 67412. I. G. FARBENINDUSTRIE A. G. Method for producing "Echtsäuregrün 8BOO". (TEA-Büro-Report). (Enlargement Print of Frames 1349-1350 of FIAT Microfilm Reel C 186, PB 25626). Oct 1926. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
Detailed directions are given. Chief starting materials are ethylbenzylaniline-sulfonic acid and o-chlorebenzaldehyde. In German.

PB L 67411. I. G. FARBENINDUSTRIE A. G. "Heliomarin 2 G L (R L)". (TEA-Büro-Report). (Enlargement Print of Frames 1351-1352 of FIAT Microfilm Reel C 186, PB 25626). Mar 1931. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
This dye is prepared from "Helioechtblau HL" and "Methylenblau BB". Complete directions are given here. In German.

PB L 67410. KÖHRES. Experiments for preparing "Indulin 6 B". (I. G. Farbenindustrie - TEA-Büro-Report). (Enlargement Print of Frames 1353-1358 of FIAT Microfilm Reel C 186, PB 25626). Apr 1932. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00
The history of this dye is given. A laboratory method for its production is described. Its utilization is mainly as a leather dye. Comparisons with competing products are made. In German.

PB L 67409. I. G. FARBENINDUSTRIE A. G. Directions for producing "ketone" (Mühler's ketone). (TEA-Büro-Report). (Enlargement Print of Frames 1359-1364 of FIAT Microfilm Reel C 186, PB 25626). Sep 1930. Price: Microfilm-$1.00 - Photostat-$1.00
Apparatus and process for producing Mühler's ketone are described in detail. In a second document attached, the process for the diethyl analog of Mühler's ketone is described. In German.

PB L 67408. I. G. FARBENINDUSTRIE A. G. "Chromoxancyanin R" from leucosulfonic acid. (TEA-Büro-Report). (Enlargement Print of Frames 1365-1367 of FIAT Microfilm Reel C 186, PB 25626). Mar 1934. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
Directions for producing this dye, and also directions for producing ""Chromoxanreinblau HLD" from leucosulfonic acid are given. An attached document concerning "Chromoxanreinblau B" is incomplete. In German.

PB L 67407. I. G. FARBENINDUSTRIE A. G. Directions for producing "Diamantphosphin D". (TEA-Büro-Report). (Enlargement Print of Frames 1368-1372 of FIAT Microfilm Reel C 186, PB 25626). Sep 1930. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
Directions for mixing "Diamantphosphin D", "GG", and "R" are given. These dyes are explained to be mixtures of the products of different stages of methylation of 2,7-dimethyl-3,6-diamino-acridine-hydrochloride and the corresponding 10-methyl-acridinium compounds. In German.

PB L 67406. I. G. FARBENINDUSTRIE A. G. Directions for producing extracted "F. W. Kristallviolett pulver extra". (TEA-Büro-Report). (Enlargement Print of Frames 1373-1376 of FIAT Microfilm Reel C 186, PB 25626). Jun 1932. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
This folder contains directions for three different specifications - powder extracted, powder, and crystals - of this dye, chief starting materials for which are dimethylaniline and phosgen. In German.

PB L 67405. I. G. FARBENINDUSTRIE A. G. Technical directions for "Fanalblau". (TEA-Büro-Report). (Enlargement Print of Frames 1377-1390 of FIAT Microfilm Reel C 186, PB 25626). Feb 1931. 14 p. Price: Microfilm-$1.00 - Photostat-$1.00
The folder contains directions for producing: three different specifications of "Fanalblau"; six specifications of "Fanalbremerblau"; and "Fanalgelb G supra". They are prepared by treating other dyes with tungstic-molybdic acid mixture and zinc dust. In German.

PB L 67404. I. G. FARBENINDUSTRIE A. G. Directions for producing "Fanalgelbgrün". (TEA-Büro-Report). (Enlargement Print of Frames 1391-1401 of FIAT Microfilm Reel C 186, PB 25626). Feb 1938. 11 p. Price: Microfilm-$1.00 - Photostat-$1.00
Directions are given for "Fanalgelbgrün G supra" (three methods) and "Fanalgelbgrün GT", also three methods for "Fanalgrün" (two for "G supra", one for "GT" (paste). Preparation is similar to dyes in PB 67405 above. In German.

PB L 67403. I. G. FARBENINDUSTRIE A. G. Technical directions for "Fanalrosa". (TEA-Büro-Report). (Enlargement Print of Frames 1402-1406 of FIAT Microfilm Reel C 186, PB 25626). Feb 1931-Aug 1934. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
Methods for producing four different specifications are described. Starting material is "Rhodamin 4 GD". Preparation is similar to dyes in PB 67405 above. In German.

PB L 67402. I. G. FARBENINDUSTRIE A. G. Technical directions for "Fanalrot". (TEA-Büro-Report). (Enlargement Print of Frames 1407-1409 of FIAT Microfilm Reel C 186, PB 25626). Feb 1931. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
Directions for producing "Fanalrot 6 B supra" are given. Chief starting material is "Rhodamin 3 B extra". Directions follow for producing "Fanalrot 6 BT paste" and "Fanalrosa BT paste". In these, the names of most chemicals used are coded. The code may be read with the help of PB 67403 where the same coding has been added in pencil over the German name of the chemicals used. Mostly, the first letter of the German name is the first code letter. Preparation is similar to dyes in PB 67405 above.

PB L 67401. I. G. FARBENINDUSTRIE A. G. Technical directions for "Fanalviolett R supra". (TEA-Büro-Report). (Enlargement Print of Frames 1411-1413 of FIAT Microfilm Reel C 186, PB 25626). Feb 1931. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
In addition to a short description of the production of "Fanalviolett R supra", directions for producing "Fanalviolett RT" (paste) are given. These appear in plain language and also coded. The code designations have also been added in pencil in the plain description. In German.

PB L 67400. I. G. FARBENINDUSTRIE A. G. Directions for producing the "Fanal T supra" brands of dyes. (TEA-Büro-Report). (Enlargement Print of Frames 1414-1416 of FIAT Microfilm Reel C 186, PB 25626). Sep 1932. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
General directions for the processing of these products are given.

PB L 67399. I. G. FARBENINDUSTRIE A. G. Directions for producing "Lackschwarzbase D extra". (TEA-Büro-Report). (Enlargement Print of Frames 1417-1420 of FIAT Microfilm-$1.00 - Photostat-$1.00

dyes (contd)
Principal starting materials are aniline and nitrobenzene. In addition to the specification mentioned in the title, directions for producing "Lackschwarz extra F" and "Lackschwarz roh" are given. In German.

PB L 67398. KLAIR. Technical direction for producing "Malachitgrün BXN. (I. G. Farbenindustrie - TEA-Büro Report). (Enlargement Print of Frames 1421-1424). Mar 1931. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
Directions for "Malachitgrün" and also "Viktoriagrünbase" are given. Both are produced with "Viktoriagrün" -leuco base, not furtherexplained here. A letter giving some additional details is added. In German.

PB L 67397. I. G. FARBENINDUSTRIE A. G. Directions for producing "Methylviolett N blau" (liquid method). (TEA-Büro-Report). (Enlargement Print of Frames 1425-1438 of FIAT Microfilm Reel C 186, PB 25626). Sep 1930-Oct 1937. 14 p. Price: Microfilm-$1.00 - Photostat-$1.00
Detailed directions for the production, by oxidation of dimethyl aniline and phenol are given. One of the four pages is almost illegible. An earlier description (of 1930), is added, using cresol instead of phenol. Also described is the process (1932) for "Methylenviolett 3 RA extra" using diethylanaline and aniline. In German.

PB L 67396. I. G. FARBENINDUSTRIE A. G. Directions for producing "Methylengrün I a". (TEA-Büro-Report). (Enlargement Print of Frames 1439-1441 of FIAT Microfilm Reel C 186, PB 25626). Jan 1932. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
This dye is prepared from "Methylenblau ZF". (See PB 67395). In German.

PB L 67395. HOFFMANN. Direction for producing "Methyl enblau I a" and "ZF" (Höchst method). (I. G. Farbenindustrie-TEA-Büro-Report). (Enlargement Print of Frames 1442-1451 of FIAT Microfilm Reel C 186, PB 25626). Sep 1928-Apr 1936. 10 p. Price: Microfilm-$1.00 - Photostat-$1.00
The process is described step by step. "I a" is the zinc chloride-double salt of the dye, "ZF" the hydrochloride, free of zinc chloride. Variations for medical purposes and for pencils are mentioned. Description of a laboratory method for "ZF", of 1928, is added. In German.

PB L 67394. LOTH. Supplement to the directions for the process for "Naphthalingrün V" concentrated. (I. G. Farbenindustrie - TEA-Büro-Report). (Enlargement Print of Frames 1452-1461 of FIAT Microfilm Reel C 186, PB 25626). Sep 1928-Sep 1937. 11 p. Price: Microfilm-$1.00 - Photostat-$1.00
The first item in this folder describes improved methods for two steps of the process. Earlier descriptions of the production of "Naphthalingrün" leuco salt, and of its oxidation to "Naphtalingrün V", follow. Directions for the production of "Tallgrün BS" and "S" and their leuco acids are added. In German.

PB L 67393. SCHMID, H. Nigrosin. (I. G. Farbenindustrie - TEA-Büro-Report). (Enlargement Print of Frames 1462-1474 of FIAT Microfilm Reel C 186, PB 25626). Jan 1928-Jun 1933. 37 p. Price: Microfilm-$1.00 - Photostat-$3.00
This document describes certain phases only of the production of "Nigrosin T", "Nigrosin TA", and "Nigrosin 2 G". Apparatus for cooling and for vacuum distillation, and their use, are described and shown in diagram. Many of the diagrams are very poorly photographed, however, and will not reproduce very well. In German.

PB L 67392. I. G. FARBENINDUSTRIE A. G. Method for producing "Nilblau BX". (TEA-Büro-Report). (Enlargement Print of Frames 1475-1485 of FIAT Microfilm Reel C 186, PB 25626). Jul 1930-Jan 1931. 10 p. Price: Microfilm-$1.00 - Photostat-$1.00
The following processes are described: (1) Production of 6-nitroso-3-diethylaminophenol-hydrochloride. (2) Its transformation, with monoethyl-α-naphthylamine, to "Nilblau BX". (3) Transformation of 6-aminino-3-diethylaminophenol, a waste product of (2), into "Nilblau BX". (4) and (5) Processes for "Rhodulinblau 5B" and "6B", from monoethyl-o-lotuidin or dimethylaniline respectively and o-chlorobenzaldehyde. In German.

PB L 67391. I. G. FARBENINDUSTRIE A. G. Directions for producing "Rhodulinorange NO". (TEA-Büro-Report). (Enlargement Print of Frames 1486-1487 of FIAT Microfilm Reel C 186, PB 25626). Sep 1930. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
The production of this dye from its "nitro-methane base" is described. In German.

PB 67390. KLEBA. Directions for producing "Safranin-base" and "Safranin T". (I.G. Farbenindustrie - TEA-Büro-Report). (Enlargement Print of Frames 1488-1499 of FIAT Microfilm Reel C 186, PB 25626). Jun 1932-Dec 1937. 12 p. Price: Microfilm-$1.00 - Photostat-$1.00
After a short description of the production of the base from "Safranin", the production of "Safranin T extra" concentrated is dealt with in detail. The old process used until 1923 is described, the history of the new process up to 1932 is given, and the process is described completely. The production of "Safranin T extra" highly concentrated, differing in the precipitation only, is also described. Starting materials are o-toluidine and aniline. In German.

PB L 67389. WOOT. "Säurecyanin B. F." (I. G. Farbenindustrie - TEA-Büro-Report). (Enlargement Print of Frames 1500-1511 of FIAT Microfilm Reel C 186, PB 25626). Sep 1930. 13 p. Price: Microfilm-$1.00 - Photostat-$1.00
This dye is prepared from sulfanilic acid, N-ethyl-N-sulfobenzyl aniline and N-(4-nitro-2-sulfophenyl)- p-phenylenediamine. Two descriptions of the process, slightly different, are given here, one from Wolfen, the other (in greater detail) from Leverkusen; both are illustrated with structural formulae showing the chemical changes taking place in the different steps. In German.

PB L 67388. KERN. Directions for producing "Säureviolett C 10 B". (I. G. Farbenindustrie. T.E.A. Büro Report). (Enlargement Print of Frames 1512-1518 of FIAT Microfilm Reel C 186, PB 25626). Jul 1929-Apr 1937. 8 p. Price: Microfilm-$1.00 - Photostat-$1.00
The steps by which ethylbenzylaniline is transformed into this dye are described. An added newer report describes the production of "Saureviolett 4 B L" from dibenzylaniline and "hydrol". A calculation is attached. The "hydrol" apparently is tetraethyl diaminobenzohydrol (see PB 67387). In German.

PB L 67387. I. G. FARBENINDUSTRIE A. G. Production of a paste of tetramethyldianino-benzohydrol. (TEA Büro Report). (Enlargement Print of Frames 1519-1520 of FIAT Microfilm Reel C 186, PB 25626). Nov 1930. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
The transformation of tetramethyl-diamino -phenylmethane into "hydrol" is described. Remarks on the differences in the effect of the lead peroxide used in the process, depending on its origin and its dilution, are added. In German.

PB L 67386. I. G. FARBENINDUSTRIE A. G. "Typophor A". (TEA Büro Report). (Enlargement Print of Frames 1521-1522 of FIAT Microfilm Reel C 186, PB 25626). Jun 1926. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
Production of this substance from "Nigrosinbase C" and olein is described. Included also is the description of the process for "Typophorschwarz", from "Lackschwarz MBC". In German.

PB L 67385. I. G. FARBENINDUSTRIE A. G. "Viktoriablau B" from the crude ketone melt. (TEA Büro Report). (En-

largement Print of Frames 1523-1525 of FIAT Microfilm Reel C 186, PB 25626). Jan 1936. 9 p. Price: Microfilm-$1.00 - Photostat-$1.00
It is described in detail how the dye is produced from the ketone prepared from dimethylaniline and phosgene. A second item describes the production of "Viktoriareinblau BO" from the ketone prepared from diethylaniline and phosgene. An older description (1929) for producing "Viktoriareinblau BO" is also present. In German.

PB L 67384. I. G. FARBENINDUSTRIE A. G. "Wollblau R M extra". (TEA Büro Report). (Enlargement Print of Frames 1532-1548 of FIAT Microfilm Reel C 186, PB 25626). Jul 1930-Sep 1933. 17 p. Price: Microfilm-$1.00 - Photostat-$2.00
This dye is developed from "FFR extra" leuco acid. In addition, the processes for "Wollechtblau FFG" (from 4,4'-diaminodiphenylamine-3'-methyl-2-sulfonic acid ("Amidotolylparaminsäure") and 1,3-diphenylnaphthylenediamine-8-sulfonic acid ("Diphenyl-E-Säure")) and "Wollechtblau GL" (from "Diphenyl-E-Säure" and 2'-methoxy-4-aminodiphenylamine-2-sulfonic acid) are described completely. The description of the process for the last-named dye is repeated with the names of the chemicals coded, otherwise identical. The last frame contains a discussion of the profitability of the methods for the two "Wollechtblau". Coding is used in it also; in part the decoded names have been added in pencil, otherwise they may be found in the two previous items in this document. In German.

PB L 67383. I. G. FARBENINDUSTRIE A. G. "Nitrosogrünöl. (TEA Büro Report). (Enlargement Print of Frames 1548a-1550 of FIAT Microfilm Reel C 186, PB 25626). Sep 1932. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
The chief data on the production of this compound, (p-nitroso-N-ethyl-N-benzyl-aniline) from ethylbenzyl aniline, are given on a standard form. A complete description of the method is included. In German.

PB L 67382. I. G. FARBENINDUSTRIE A. G. "Indocyanin B" (TEA Büro Report). (Enlargement Print of Frames 1551-1557 of FIAT Microfilm Reel C 186, PB 25626). Jun 1930-Sep 1932. 12 p. Price: Microfilm-$1.00 - Photostat-$1.00
The first item in this folder describes the production of "Indocyanin B" by sulfonation of "Blau II". The second item, frames 1553-1557, describes the production of the same dye from "Grünöl" (ethylbenzylaniline) and phenyl-naphthylamine. The text is illegible in the enlargement print but may be read in the reel, except frame 1553, which is partly illegible in the reel also. The processes are described by means of structural formulae on frame 1556, which are completely repeated on frame 1557 where they are legible in the print also. A third item describes the production of "Brillant Indocyanin 6 B" from ethyl benzyl aniline sulfonic acid ("Grünsäure") and p-chlorobenzaldehyd, a fourth one that of "Brillant Indocyanin G" from ethylbenzyl-m-toluidine ("M-base") and benzaldehyde. The legibility of the last two items is not very good in the prints or in the reel. In German.

PB L 67381. LOMMEL. "Gallocyanive". (I. G. Farbenindustrie. TEA Büro Report). (Enlargement Print of Frames 1563-1566 of FIAT Microfilm Reel C 186, PB 25626). May 1922. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
This item contains a history of this and related dyes, beginning with a patent granted in 1881. Processes are not described here. The report is almost illegible throughout in the reel, and will reproduce very poorly. In German.

PB L 67380. HÖFER. Sulfonation of "Safraninblau EG" to Supraninblau EG". (I. G. Farbenindustrie TEA Büro Report). (Enlargement Print of Frame 1567 of FIAT Microfilm Reel C 186, PB 25626). Jun 1937. 1 p. Price: Microfilm-$1.00-Photostat-$1.00
The method is described. The same method may be used to transform "Salfraninblau EB" into "Echtwollblau EB". In German.

PB L 67379. I. G. FARBENINDUSTRIE A. G. Composition of the "Cosal" brands. (TEA Büro Report). (Enlargement Print of Frames 1568-1570 of FIAT Microfilm Reel C 186, PB 25626). Apr 1939. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
The composition of the following "Cosal" compositions (apparently adhesives) is disclosed: Cosal U 211, U 960, U 989, U 990, D 12, A 950, A 973, A 974, A 975, A976. In German.

PB L 67378. I. G. FARBENINDUSTRIE A. G. Directions for testing the cellulose extract "Agfa special". (TEA Büro Report). (Enlargement Print of Frames 1571-1572 of FIAT Microfilm Reel C 186, PB 25626). n. d. 2 p. Price: Microfilm-$1.00 -Photostat-$1.00
The tests to be carried out are described. Legibility is not very good. In German.

PB L 67377. I. G. FARBENINDUSTRIE A. G. Sodium sulfate. (TEA Büro Report). (Enlargement Print of Frames 1573-1575 of FIAT Microfilm Reel C 186, PB 25626). Feb 1940. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
This report describes in detail tests for purity of sodium sulfate to be used in dye production. In German.

PB L 67376. I. G. FARBENINDUSTRIE A. G. Production of Malachite green - dextrin flakes containing about 5% of Malachite green. (TEA Büro Report). (Enlargement Print of Frame 1576 of FIAT Microfilm Reel C 186, PB 25626). Oct 1933. 1 p. Price: Microfilm-$1.00-Photostat-$1.00
The dextrin solution is spread on glass plates and dried to flakes. The flakes are mixed into a methanol solution of Malachite green and dried. In German.

PB L 67375. I. G. FARBENINDUSTRIE A. G. Production of dilute fuchsin containing crystals containing about 5% of fuchsin. (TEA Büro Report). (Enlargement Print of Frames 1577-1578 of FIAT Microfilm Reel C 186, PB 25626). Sep 1933. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
Production of dextrin grains containing some fuchsin, and their further coloration and drying are described. In an analogous way, grains containing malachite green may be prepared. In German.

PB L 67374. I. G. FARBENINDUSTRIE A. G. Production of "Cohesan". (TEA Büro Report). (Enlargement Print of Frames 1579-1582 of FIAT Microfilm Reel C 186, PB 25626). Feb 1931. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
"Cohesan", a cement for leather, is prepared from varying proportions of waste film, "Mannol", "Mollit I", castor oil, solvent "E13" and gasoline. Proportion for "Cohesan S", "Cohesan TR", and "Cohesan SS" we described. Safety measures and tests are described. In German.

PB L 67373. I. G. FARBENINDUSTRIE A. G. Directions for producing "Colloresin DK". (TEA Büro Report). (Enlargement Print of Frames 1584-1587 of FIAT Microfilm Reel C 186, PB 25626). May 1930. 4 p. Price: Microfilm-$1.00-Photostat-$1.00
Transformation of cellulose into "Colloresin DK" (hydroxyethyl methyl cellulose) is described in detail. The apparatus used is described. A cost calculation is added. Legibility is poor. In German.

PB L 67372. I. G. FARBENINDUSTRIE A. G. "Methoxyacetparamin". (TEA Büro Report). (Enlargement Print of Frames 1588-1589 of FIAT Microfilm Reel C 186, PB 25626). Nov 1939. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
This substance, 3-amino-6-acetylamino-1-methoxybenzene (4-acetylamino-m-anisidine) is obtained from 3-nitro-6-acetylamino-1-methoxybenzene by reduction with iron. The method is described. In German.

PB L 67371. I. G. FARBENINDUSTRIE A. G. "Nitrochloranis". (TEA-Büro Report). (Enlargement Print of Frame

Dyes (contd)

1590 of FIAT Microfilm Reel C 186, PB 25626). Oct 1939. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00

This substance, 4-chloro-5-nitro-2-oxalylamino-1-methoxybenzene, (4-nitro-5-chloro-oxalyl-o-anisidine), is obtained by the reaction of oxalic acid with 4-chloro-5-nitro-2-amino-1 methoxybenzene. The process is described. In German.

PB L 67370. I. G. FARBENINDUSTRIE A. G. "Chloroxanis". (TEA Büro Report). (Enlargement Print of Frames 1591-1592 of FIAT Microfilm Reel C 186, PB 25626). Dec 1938. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00

This substance, 4-chloro-5-amino-2-oxalylamino-1-methoxy benzene (4-amino-5-chloro-oxalyl-o-anisidine), is obtained by the reduction, by means of iron, of 4-chloro-5-nitro-2-oxalylamino-1-methoxy benzene ("Nitrochloroxanis", see PB 67371). The method is described. In German.

PB L 67369. I. G. FARBENINDUSTRIE A. G. Directions for producing "Diamingogen extra". (TEA Büro Report). (Enlargement Print of Frames 1593-1594 of FIAT Microfilm Reel C 186, PB 25626). 1933. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00

This dye is produced by diazotization of a mixture of acetamido-1, 6 and 1,7-Cleve's acid, coupling with α-napthylamine, second diazotization and coupling with gamma acid. The processes are described in detail. In German.

PB L 67368. I. G. FARBENINDUSTRIE A. G. Method for producing "Diazoechtschwarz extra". (TEA Büro Report). (Enlargement Print of Frames 1595-1596 of FIAT Microfilm Reel C 186, PB 25626). Jul 1927. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00

The production of this dye from "acetamidobrillantsäure", (1,6-Cleve's acid), "acetamidocyansäure" (1,7-Cleve's acid) and "amido naphthol G" (G-acid) is described in detail. In German.

PB L 67367. I. G. FARBENINDUSTRIE A. G. Method for producing "Diazobordeaux 7 B". (TEA Büro Report). (Enlargement Print of Frames 1597-1599 of FIAT Microfilm Reel C 186, PB 25626). Dec 1936-Jun 1938. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00

This dye is produced by diazotization of "formylmetamin" and coupling with J-acid imide. The steps are described in detail. A second paper describes the production of "Diazobordeaux 7 BD" from m-diaminoazo-hydroxybenzene and J acid. In German.

PB L 67366. I. G. FARBENINDUSTRIE A. G. "Diazobraun". (TEA Büro Report). (Enlargement Print of Frames 1600-1605 of FIAT Microfilm Reel C 186, PB 25626). Dec 1932-Jan 1933. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00

This folder contains two reports. The first one describes the production of "Diazobraun 3 G" from oxalyltolamic acid, cresidine and phosgene. The second deals with "Diazobraun 6 G" produced from nitrobenzoyltolamic acid, cresidine and phosgene. Both items are not well legible and will reproduce poorly. In German.

PB L 67365. I. G. FARBENINDUSTRIE A. G. Method for producing "bohdo" from "papierbordeaux 2 GU". (TEA Büro Report). (Enlargement Print of Frame 1606 of FIAT Microfilm Reel C 186, PB 25626). Jan 1932. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00

"Bohdo" apparently is a code word. The description also uses codings for chemicals. The text consists of seven lines only, covering only part of the process. In German (coded).

PB L 67364. I. G. FARBENINDUSTRIE A. G. "Diazobrillantgrün 3 G". (TEA Büro Report). (Enlargement Print of Frames 1607-1610 of FIAT Microfilm Reel C 186, PB 25626). Sep 1925-Dec 1930. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00

2,5-Dichloroanilino-4-sulfonic acid is diazotized, then coupled with 1-amino-2-naphtholethylether-6-sulfonic acid ("amidoschäfferaether"), further diazotized and coupled with p-amino benzoyl-2-amino-5-naphthol-7-sulfonic acid. In German.

PB L 67363. I. G. FARBENINDUSTRIE A. G. "Diazobrillantblau 2 BLA". (TEA Büro Report). (Enlargement Print of Frames 1611-1612 of FIAT Microfilm Reel C 186, PB 25626). Feb 1940. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00

This dye is produced from "Chloroxanis", (4-amino-5-chloro-oxalyl-o-anisidine) "Methoxyacetparanin, (4-acetylamino-o-anisidine), and "Amido schäffer äther säure", (1-amino-2-naphtholethyl ether-6-sulfonic acid). In German.

PB L 67362. I. G. FARBENINDUSTRIE A. G. "Diazobrillantorange." (TEA Büro Report). (Enlargement Print of Frames 1613-1619 of FIAT Microfilm Reel C 186, PB 25626). Dec 1932-Apr 1939. 7 p. Price: Microfilm-$1.00 - Photostat-$1.00

This folder contains complete descriptions for the process for "Diazobrillantorange GR extra ", from aniline and diacetaminobenzoyl- J -acid (this item is of poor legibility); "Diazobrillantorange GRN extra" from aniline, "parasol- J - acid," and m-nitrocarboxypyrazolone; and "Diazobrillantorange RNO" from 1(3'-aminobenzoyl)-amino-3-aminobenzene (-"Metasolmetamin") and 3'-nitro-5-pyrasolone-3-carboxylic acid. In German.

PB L 67361. I. G. FARBENINDUSTRIE A. G. "Diazobrillantscharlach ROA extra". (TEA Büro Report). (Enlargement Print of Frames 1620-1622 of FIAT Microfilm Reel C 186, PB 25626). Dec 1932. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00

This dye is produced from o-anisidine, β-naphthylamine, and "Parasolsäure". The description of the process is almost illegible in the reel. A second item in this folder is the first page of a description of the process for "Diazobrillantscharlach 2 HL extra", from γ-acid area and formylacetamine. The second page is missing as enlargement print but present in the reel. Both frames, however, are almost illegible. In German.

PB L 67360. ROSS. "Diazogelb K 23107". (TEA Büro Report). (Enlargement Print of Frame 1623 of FIAT Microfilm Reel C 186, PB 25626). May 1934. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00

The preparation of this dye from di-p-aminobenzoyl-1,4-naphthylinediamine-6-or 7-sulfonic acid and the "pyrasolon of p-sulfonilic acid" is described. Legibility is not very good. In German.

PB L 67359. I. G. FARBENINDUSTRIE A. G. "Diazoindigoblau BR extra". (TEA Büro Report). (Enlargement Print of Frames 1624-1634 of FIAT Microfilm Reel C 186, PB 25626). Dec 1932. 11 p. Price: Microfilm-$1.00 - Photostat-$1.00

This dye is produced from "oxalylparanin" (4-amino-oxalylaniline), Cleve's (6) acid, and F-acid. The process is described in detail. Legibility is not very good. Added is the process for "Diazoindigoblau 4 GL extra", which is almost illegible. In German.

PB L 67358. I. G. FARBENINDUSTRIE A. G. "Diazolichtgelb 2G". (TEA Büro Report). (Enlargement Print of Frames 1643-1644 of FIAT Microfilm Reel C 186, PB 25626). Dec 1932. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00

This dye is obtained by reduction of "Patrolflavonsäure" by means of iron and hydrochloric acid. Legibility is poor. In German.

PB L 67357. I. G. FARBENINDUSTRIE A. G. Method for producing "Diazoreinblau B". (TEA-Büro Report). (Enlarge-

Dyes (contd)

ment Print of Frames 1645-1650 of FIAT Microfilm Reel C 186, PB 25626). Jul 1927. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00

This folder contains two different sets of directions for producing the above-named dye from dianisidine, 1-acetylamino-5-naphthol-4,6 disulfonic acid ("Acetylschwarzsäure"), and 4-acetylamino-2-toluidine (= "Triacet"). (One of these two reports is almost illegible in the reel). A third item describes the production of "Diazoreinblau 3 GL" from 4-amino-5-chloro-oxalyl-o-anisidine ("Chloroxanis"), 1-naphthylamine-6-sulfonic acid ("Brillantsäure"), and 1-naphthol-3-sulfonic acid ("Naphthol III-säure"). In German.

PB L 67356. I. G. FARBENINDUSTRIE A. G. Directions for the production of "Diazoschwarz BHN". (TEA-Büro Report). (Enlargement Print of Frames 1652-1657 of FIAT Microfilm Reel C 186, PB 25626). Apr 1932. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00

Starting materials are benzidine hydrochloride, H-acid and "amidonaphthol G". The processes and tests to be carried out are described in detail. Legibility is poor. In German.

PB L 67355. I. G. FARBENINDUSTRIE A. G. Method for producing "Naphtogenblau 2 R". (TEA-Büro Report). (Enlargement Print of Frames 1659-1662 of FIAT Microfilm Reel C 186, PB 25626). Jan 1930. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00

Starting materials are C-acid (2-naphthylamine-4,8-disulfonic acid), α-naphthylamine, Cleve's acid (mixture of 6 and 7) and cresidine. A step-by-step description is given. Legibility is poor. In German.

PB L 67354. I. G. FARBENINDUSTRIE A. G. Methods for production of "Diazoreinblau 3 G". (TEA-Büro Report). (Enlargement Print of Frames 1663-1664 of FIAT Microfilm Reel C 186, PB 25626). Jul 1927. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00

Starting materials are dianisidine, "Acetylschwarzsäure" 1-acetylamino-8-napthol-4,6-disulfonic acid and "Metacetamin" (m-acetylaminoaniline). The process is described. In German.

PB L 67353. I. G. FARBENINDUSTRIE A. G. Method for production of "Oxydiaminogen OB". (TEA-Büro Report) (Enlargement Print of Frames 1665-1671 of FIAT Microfilm Reel C 186, PB 25626). Sep 1930-May 1939. 7 p. Price: Microfilm-$1.00 - Photostat-$1.00

This substance is stated to be chemically identical with "Diazogenschwarz F" and "Diazoschwarz OH". It is produced from "Acetparamin" (p-acetylaminoaniline), gamma acid and Cleve's acid (6 and 7). Both older and more recent directions are given here. In German.

PB L 67352. I. G. FARBENINDUSTRIE A. G. Method for production of "Diaminschwarz BH". (TEA-Büro Report). (Enlargement Print of Frames 1674-1675 of FIAT Microfilm Reel C 186, PB 25626). Feb 1938. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00

The production of this dye from benzidine, H-acid and gamma-acid is described completely. In German.

PB L 67351. I. G. FARBENINDUSTRIE A. G. Method for producing "Naphtogenblau 2 R". (TEA-Büro Report) (Enlargement Print of Frames 1676-1681 of FIAT Microfilm Reel C 186, PB 25626). Apr 1931-May 1939. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00

Complete direction for producing this dye from C-acid(2naphthylamine-4,8-disulfonic acid) α-naphthylamine, Cleve's acid (6 and 7), and cresidine are given. Earlier directions are added (the name then was "Diazo Indigoblau 2 RL"); these are almost illegible. Production of "Naphthogenblau 4 R", differing only in the last step of production, is also described. In German.

PB L 67350. I. G. FARBENINDUSTRIE A. G. Method for producing "Sambesischwarz V". (TEA-Büro Report). (Enlargement Print of Frames 1682-1685 of FIAT Microfilm Reel C 186, PB 25626). Aug 1936. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00

Two sets of directions describe the production of this dye from p-nitranilins, S-acid. In German.

PB L 67349. I. G. FARBENINDUSTRIE A. G. "Diazolichtgrün GFL". (TEA-Büro Report). (Enlargement Print of Frames 1686-1691 of FIAT Microfilm Reel C 186, PB 25626). Dec 1930. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00

The production of this dye from "Orthanilsäure", "cyansaure", "Amidoschäfferäther", and m-aminobenzoyl-J-acid is described. In German.

PB L 67348. I. G. FARBENINDUSTRIE A. G. "Rhodamin 6G extra". (TEA-Büro Report). (Enlargement Print of Frames 1701-1702 of FIAT Microfilm Reel C 186, PB 25626). Dec 1937. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00

This report describes an experiment for producing the above named substance. Not enough of it can be read to make an abstract possible. In German.

PB L 67347. I. G. FARBENINDUSTRIE A. G. Method for producing 3-nitro-4-anisidin, "Echtbordo GP base". (TEA-Büro Report). (Enlargement Print of Frames 1705-1706 of FIAT Microfilm Reel C 186, PB 25626). May 1939. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00

The process for transforming acetyl-p-anisidine, dissolved in chlorobenzene, into the above-named product is described in detail. In German.

PB L 67346. I. G. FARBENINDUSTRIE A. G. Method for producing m-nitroaniline. (TEA-Büro Report). (Enlargement Print of Frames 1707-1709 of FIAT Microfilm Reel C 186, PB 25626). Jul 1938. 3 p. Price: Microfilm-$1.00-Photostat-$1.00

This substance, also called "Echtorange H-base", is produced from m-dinitrobensene by means of sodium hydrosulfide. Detailed directions are given. In German.

PB L 67345. I. G. FARBENINDUSTRIE A. G. Method for producing m-nitro-aniline. (TEA-Büro Report). (Enlargement Print of Frames 1710-1713 of FIAT Microfilm Reel C 186, PB 25626). Jun 1926. 4 p. Price: Microfilm-$1.00-Photostat-$1.00

This is the description of an old process. (See PB 67346 for newer one). A mixture of sodium sulfide and sulfur is used for the reduction of dinitrobenzene. In German.

PB L 67344. I. G. FARBENINDUSTRIE A. G. Technical directions for producing 5-chloro-2-tolindine-nitrosamine. (TEA-Büro Report). (Enlargement Print of Frames 1714-1717 of FIAT Microfilm Reel C 186, PB 25626). Nov 1938. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00

The production of this substance from 4-chloro-o-toluidine (production of which is not dealt with here) is described in detail. It includes the steps of producing the hydrochloride, diazotization, and re-arrangement to the syn-and anti-diazotate. Legibility is very poor. In German.

PB L 67343. I. G. FARBENINDUSTRIE A. G. "Blaubase F moist". (TEA-Büro Report). (Enlargement Print of Frames 1718-1720 of FIAT Microfilm Reel C 186, PB 25626). Oct 1938. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00

This substance, 4'-methoxy-4-amino-diphenylamine, is obtained in the form of its sulfate by the reaction of p'-methoxyphenyl-p-phenylinediamine sulfonic acid with sulfuric acid and precipitation with sodium hydroxide solution. The process is described. It yields 81% of the theoretical amount. In German.

PB L 67342. I. G. FARBENINDUSTRIE, A. G. "Benzodiäth". (TEA-Büro Report). (Enlargement Print of Frames 1721-1722 of FIAT Microfilm Reel C 186, PB 25626). Sep 1938. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
The complete name of this substance is benzoyl amino-hydroquinone-diethylether (2-benzoylamino-1,4-diethoxy-benzene). It is obtained by benzoylation of 2-amino-1,4-diethoxybenzene in aqueous suspension in the presence of soda, in a yield of 98%. The process is described in detail. In German.

PB L 67341. I. G. FARBENINDUSTRIE, A. G. "Nitrobenzodiäth". (TEA-Büro Report). (Enlargement Print of Frames 1723-1724 of FIAT Microfilm Reel C 186, PB 25626). Sep 1938. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
This substance, the complete name of which is 5-benzoylamino-2-nitro-hydroquinone diethylether, (5-benzoylamino-2-nitro-1,4-diethoxybenzene) is produced by nitration of "Benzodiäth" (see PB 67342) by means of aqueous nitric acid at the boiling point. The yield is 92% of the theoretical. In German.

PB L 67340. RIMELE. "Echtblau BB Base". (TEA-Büro Report). (Enlargement Print of Frames 1725-1726 of FIAT Microfilm Reel C 186, PB 25626). Mar 1938. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
This substance also has the I. G. name "Aminobenzodiäth". It is 2-benzoylamino-5-amino-hydroquinone diethylether (4-benzoylamino-2,5-diethoxyaniline). Experiments are described for its production by catalytic to reduction of the corresponding nitro compound, (see PB 67341 above). The results were not yet completely satisfactory, and inferior to those with the pyridine bisulfite process. In German.

PB L 67339. WESCHE. Directions for producing 100 kilograms of hydroquinone. (I. G. Farbenindustrie - TEA-Büro Report). (Enlargement Print of Frames 1731-1734 of FIAT Microfilm Reel C 186, PB 25626). Jan 1936. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
A mixture of aniline and sulfuric acid is oxidized by means of sodium bichromate. The product is then reduced with sulfurdioxide. The entire process is described in great detail, including recovery of sulfurous acid and utilization of the waste chromium in the form of various compounds. Legibility is poor. In German.

PB L 67338. I. G. FARBENINDUSTRIE, A. G. "Azofuchsin 6 B". (TEA-Büro Report). (Enlargement Print of Frame 1765 of FIAT Microfilm Reel C 186, PB 25626). Jan 1922. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
This dye is produced from acetyl- H acid (obtained by the reaction of acetic acid anhydride with H-acid) and diazotised acetyl-p-phenylenediamine. In German.

PB L 67337. I. G. FARBENINDUSTRIE, A. G. "Benzoazurin G". (TEA-Büro Report). (Enlargement Print of Frame 1767 of FIAT Microfilm Reel C 186, PB 25626). n. d. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
Production of this dye is described. Starting materials are dianisidine hydrochloride and 1,4-naphtholsulfonic acid. In German.

PB L 67336. I. G. FARBENINDUSTRIE, A. G. "Benzobraun M C". (TEA-Büro Report). (Enlargement Print of Frame 1768 of FIAT Microfilm Reel C 186, PB 25626). Nov 1921. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
The production of this dye from benzidine, salicylic acid, and "amidonaphtholsulfosäure G" is described. In German.

PB L 67335. I. G. FARBENINDUSTRIE, A. G. "Benzoechtblau G". (TEA-Büro Report). (Enlargement Print of Frames 1749-1754 of FIAT Microfilm Reel C 186, PB 25626). Jan 1922. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00
This folder contains descriptions of processes for "Benzoechtblau G", "Benzoechtblau FFL", "Diazoindigoblau 2 RL" and "Diazoindigoblau 4 RL". In German.

PB L 67334. I. G. FARBENINDUSTRIE, A. G. "Benzoechtorange S". (TEA-Büro Report). (Enlargement Print of Frames 1755-1758 of FIAT Microfilm Reel C 186, PB 25626). n. d. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
This folder contains descriptions of the processes for "Benzoechtorange S", "Benzoechtscharlach 4 BS" and "Benzoechtscharlach 8 BS", all starting from the urea of 2-amino-5-naphthol-7-sulfonic acid, coupled with diazotised aniline, aniline and acetyl-p-phenylenediamine, and 1-naphthylamine-4-sulfonic acid and o-anisidine, respectively, and "Benzoechtscharlach GS", starting with β-naphthionic acid coupled with diazotised-aniline. In German.

PB L 67333. I. G. FARBENINDUSTRIE, A. G. "Benzoechtschwarz L". (TEA-Büro Report). (Enlargement Print of Frame 1759 of FIAT Microfilm Reel C 186, PB 25626). n. d. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
This dye is stated to be composed of aminosabicylic acid, α-naphthylamine, and "Amidonaphtholsulfosäure G". The diazotization is not described here, but explained as being identical with that for "Diamantschwarz PB". The remainder of the process is described. In German.

PB L 67332. I. G. FARBENINDUSTRIE, A. G. "Benzoechtviolett N C". (TEA-Büro Report). (Enlargement Print of Frames 1760-1761 of FIAT Microfilm Reel C 186, PB 25626). n. d. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
This dye is produced from benzidine, "diazotised as usual", and "Amidonaphtholsulfosäure G". Directions for making "Benzolichtblau 4 GL" are also given. In German.

PB L 67331. I. G. FARBENINDUSTRIE, A. G. "Benzolichtrot 8 B L". (TEA-Büro Report). (Enlargement Print of Frames 1762-1763 of FIAT Microfilm Reel C 186, PB 25626). n. d. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
The production of this dye is described completely. Starting materials are "Amidonaphtholsulfosäure J" and diazotised aminoazobenzenesulfonic acid. In German.

PB L 67330. I. G. FARBENINDUSTRIE, A. G. "Brillantbenzoechtviolett B L". (TEA-Büro Report). (Enlargement Print of Frame 1764 of FIAT Microfilm Reel C 186, PB 25626). n. d. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
Directions for the production of this dye are given. Principal basic materials are xylidinesulfonic acid, cresidine and phenyl-J acid. In German.

PB L 67329. I. G. FARBENINDUSTRIE, A. G. "Benzopurpurin 4 B". (TEA-Büro Report). (Enlargement Print of Frames 1765-1767 of FIAT Microfilm Reel C 186, PB 25626). n. d. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
The production of this dye from tolidine and 1,4-naphthylamine-sulfonic acid is described. On an additional sheet, the production of "Benzopurpurin 10 B" is described, starting with dianisidine instead of tolidine. In German.

PB L 67328. I. G. FARBENINDUSTRIE A. G. "Chromgelb". (TEA-Büro Report). (Enlargement Print of Frames 1768-1769 of FIAT Microfilm Reel C 186, PB 25626). Jan 1922-Oct 1923. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
This folder contains directions for producing "Chromgelb R extra", starting with m-nitrobenzidine and salicylic acid and Chromgelb BR", starting with α-naphthylamine-sulfonic acid. In German.

PB L 67327. I. G. FARBENINDUSTRIE A. G. "Congo". (TEA-Büro Report). (Enlargement Print of Frame 1770 of FIAT Microfilm Reel C 186, PB 25626). n. d. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
Principal ingredients are benzidine and naphthylamine sodium sulfonate. The process is described. In German.

Dyes (contd)

PB L 67326. I. G. FARBENINDUSTRIE A. G. "Diamantblauschwarz". (TEA-Büro Report). (Enlargement Print of Frame 1771 of FIAT Microfilm Reel C 186, PB 25626). Oct 1921. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
This dye is produced from α-naphthol and "diazosäure". The process is described. In German.

PB L 67325. I. G. FARBENINDUSTRIE A. G. Method for producing "Diamantgrün B". (TEA-Büro Report). (Enlargement Print of Frame 1772 of FIAT Microfilm Reel C 186, PB 25626). n. d. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
This dye is made from aminosalicylic acid, α-naphthylamine, and dihydroxynapthalene-sulfonic acid. The process is described. In German.

PB L 67324. I. G. FARBENINDUSTRIE A. G. "Diazoschwarz BHN". (TEA-Büro Report). (Enlargement Print of Frames 1773-1782 of FIAT Microfilm Reel C 186, PB 25626). Aug 1920-Jan 1922. 10 p. Price: Microfilm-$1.00 - Photostat-$1.00
This dye is produced by diazotisation of benzidine and reaction with H-acid and "amidonaphtolsäure G". Description of the following processes are added: "Diamantschwarz F" from diazotised amino-salicylic acid and α-naphthylamine; "Diamantschwarz FB" from aminosalicylic acid and α-naphthylamine, diazotised together, and coupled with 1,5-naptholsulfic acid; "Diamantschwarz PV" by diazotisation of aminophenolsulfonic acid and coupling with 1,5-dihydroxynaphthalene; "Diazoechtschwarz extra" by diazotisation of acetamino-Cleve's acid, coupling with α-naphthylamine, further diazotisation and coupling with "Amidonaphthol G" (7,8-diamino-1-naphthol-3-sulfonic acid); and "Direkttiefschwarz I extra" by diazotisation of benzidine, coupling with H-acid and coupling of the product with diazotised aniline and then with m-phenylene diamine. The process for "Direkttiefschwarz RW extra" is identical with the preceding, except that the last step is coupling with m-toluylene-diamine. In German.

PB L 67323. I. G. FARBENINDUSTRIE A. G. "Diazoindigoblau B R extra". (TEA-Büro Report). (Enlargement Print of Frames 1783-1786 of FIAT Microfilm Reel C 186, PB 25626). Jan 1922. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
The production of this dye, starting with p-phenylene oxamic acid Cleve's acid-1,6, and 2-naphthol-7-sulfonic acid is described. The description contains hand written corrections which are not very legible. Directions for making "Diazo-Indigoblau 2 RL" and "Diazo-Indigoblau 4RL" from "Wollschwarz BH" and cresidine or p-xylidine, respectively are also given. In German.

PB L 67322. I. G. FARBENINDUSTRIE A. G. Method for producing "Direktgelb R". (TEA-Büro Report). (Enlargement Print of Frames 1787-1788 of FIAT Microfilm Reel C 186, PB 25626). Jan 1922. 2 p. Price: Microfilm-$1.00-Photostat-$1.00
This dye is produced from p-nitrotoluene sulfonic acid or its sodium salt. Directions for producing "Echtlichtgelb 3 G" from phenylhydrazine-o-sulfonic acid and sodium tartrate are added. In German.

PB L 67321. I. G. FARBENINDUSTRIE A. G. "Naphtolblauschwarz M." (TEA-Büro Report). (Enlargement Print of Frames 1791-1795 of FIAT Microfilm Reel C 186, PB 25626). Aug-Nov 1921. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
The production of this dye, from p-nitroaniline, H-acid and aniline is described. Directions are also given for the production of "Naphtylaminschwarz D"-from a mixture of 1, 3, 6, and 1, 3, 7 naphthylamine disulfonic acid and α-naphthylamine and of "Plutoschwarz A extra" from acetyl-p-phenylene diamine, aminonaphtholsulfonic acid and 1-naphthylamine-6 and 7-sulfonic acid. In German.

PB L 67320. I. G. FARBENINDUSTRIE A. G. "Sulfonsäureblau". (TEA-Büro Report). (Enlargement Print of Frames 1798-1800 of FIAT Microfilm Reel C 186, PB 25626). Oct 1921. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
This folder contains directions for producing "Sulfonsäureblau B" and "-R". The former is prepared from H-acid and tolylnaphthylaminesulfonic acid; the latter from H-acid and phenyl-S-acid. The papers are not very legible and bear some corrections made in script. In German.

PB L 67319. I. G. FARBENINDUSTRIE A. G. "Sulfocyanin 5 R extra". (TEA-Büro Report). (Enlargement Print of Frames 1801-1802 of FIAT Microfilm Reel C 186, PB 25626). Oct 1922. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
Complete directions are given, for transforming metanilic acid and α-naphthylamine into "Sulfonschwarzbase", and the latter with phenyl-S-salt into the dye proper. In German.

PB L 67318. I. G. FARBENINDUSTRIE A. G. "Sulfocyaninschwarz II B. (TEA-Büro Report). (Enlargement Print of Frames 1803-1804 of FIAT Microfilm Reel C 186, PB 25626). n. d. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
This dye is produced from 1,5-naphthylaminesulfonic acid, α-naphthylamine and "phenylnaphthionat 1, 8". The process is described. Legibility is poor. In German.

PB L 67317. I. G. FARBENINDUSTRIE A. G. "Brillantsäuregrün 6 B. (TEA-Büro Report). (Enlargement Print of Frames 1809-1810 of FIAT Microfilm Reel C 186, PB 25626). n. d. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
This dye is produced from ethylbenzylaniline sulfonic acid by condensation with α-chlorobenzaldehyde and subsequent oxidation. Complete directions are given. In German.

PB L 67316. I. G. FARBENINDUSTRIE A. G. "Brillant Wollblau G extra". (TEA-Büro Report). (Enlargement Print of Frames 1811-1812 of FIAT Microfilm Reel C 186, PB 25626). n. d. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
This dye is obtained by sulfonation of "Wollblau N base", which is the hydrochloride of the condensation product of Michler's ketone and p-ethoxyphenyl-α-naphthylamine. The process is described. In German.

PB L 67315. I. G. FARBENINDUSTRIE A. G. "Chrysophenin." (TEA-Büro Report). (Enlargement Print of Frame 1813 of FIAT Microfilm Reel C 186, PB 25626). n. d. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
This substance is obtained by alkylation of "Brillantgelb". The process is described. In German.

PB L 67314. I. G. FARBENINDUSTRIE A. G. "Hydrol O" for "Echtsäureviolett 10 B. (TEA-Büro Report). (Enlargement Print of Frames 1814-1820 of FIAT Microfilm Reel C 186, Jun 1921. 7 p. Price: Microfilm-$1.00 - Photostat-$1.00
In addition to directions for producing the above-named intermediate, this folder contains directions for oxidising the leuco acid of "Echtsäure-violett 10 B", and for producing this dye in powder form. Legibility is poor. In German.

PB L 67313. I. G. FARBENINDUSTRIE A. G. "Wollgrün B S". (TEA-Büro Report). (Enlargement Print of Frames 1821-1821A of FIAT Microfilm Reel C 186, PB 25626). Jun 1921. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
Directions for producing this dye from "Hydrol" and 2-naphthol-3,6—disulfonic acid are given. Legibility is poor. In German.

PB L 67312. I. G. FARBENINDUSTRIE, A. G. Directions for producing "Katigen Gelb GG extra. (TEA-Büro Report). (Enlargement Print of Frames 1822-1825 of FIAT Microfilm

Dyes (contd)
Reel C 186, PB 25626). Apr 1927-Oct 1931. 5 p.
Price: Microfilm-$1.00 - Photostat-$1.00
A mixture of dinitroacetanilide and phthalic anhydride is heated with a solution of sulfur in sodium hydroxide solution. The following processes are also described: "Katigengelb GGK extra" from "Gelbase GGK" (see below) and sodium sulfide; "Katigen Gelb-base GGK" from 3-amino-p-acetotolinde, "Benzidin base", and sulfur; and "Schwefelgelb EG" from diformyl-m-toluene diamine, benzidine, and sulfur. In German.

PB L 67311. I. G. FARBENINDUSTRIE A. G. Directions for producing "Immedial Orange C". (TEA-Büro Report). (Enlargement Print of Frames 1826-1830 of FIAT Microfilm Reel C 186, PB 25626). 1927-Oct 1931. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
This dye is produced from "Thiobase R" which is obtained by the reaction of 2,4-toluenediamine and sulfur. In addition to these two processes, the process for "Schwefelorange RF" from 2,4-toluenediamine, diphthaloyl-paraphenylenediamine, and sulfur is described here. In German.

PB L 67310. I. G. FARBENINDUSTRIE A. G. Method for producing "Thiobase COG". (TEA-Büro Report). (Enlargement Print of Frames 1839-1841 of FIAT Microfilm Reel C 186, PB 25626). Mar 1932. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
This substance is produced by the reaction of 2,4-toluenediamine with melted sulfur. The thiobase, melted with sodium sulfide, produces "Immedial Catechu O". The processes are described. In German.

PB L 67309. I. G. FARBENINDUSTRIE A. G. Directions for producing "Immedial Dunkelbraun A". (TEA-Büro Report). (Enlargement Print of Frames 1842-1844 of FIAT Microfilm Reel C 186, PB 25626). 1927-May 1939. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
This dye is produced from dinitrohydroxy-diphenylamine with sodium sulfide and sulfur. An additional paper describes the production of "Immedial echtdunkelbraun B extra" from "Purpurol". In German.

PB L 67308. I. G. FARBENINDUSTRIE A. G. Directions for producing "Immedial Marron BU". (TEA-Büro Report). (Enlargement Print of Frame 1845, FIAT Microfilm Reel C 186, PB 25626). Apr 1927. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
This dye is obtained by the reaction of sodium sulfide, sulfur and copper sulfate with "Bordobase M". For the latter, see PB 67306. In German.

PB L 67307. I. G. FARBENINDUSTRIE A. G. Directions for producing "Immedial Prune S". (TEA-Büro Report). (Enlargement Print of Frame 1846 of FIAT Microfilm Reel C 186, PB 25626). n. d. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
This dye is produced by melting "Bordobase M" (p-amino-p-hydroxy-phenazine, see PB 67306) with sodium sulfide, sulfur, and optionally, copper sulfate. The exact procedure is described. In German.

PB L 67306. I. G. FARBENINDUSTRIE A. G. Directions for producing para-amino-para-hydroxy-phenazine "M". (TEA-Büro Report). (Enlargement Print of Frames 1817-1818 of FIAT Microfilm Reel C 186, PB 25626). n. d. 2 p.
Price: Microfilm-$1.00 - Photostat-$1.00
According to a hand written annotation this substance is identical with "Immedialbordobase M". Starting material is 2,4-dinitro-4'-hydroxy diphenylamine, which in successive steps is transformed into 2,4 diamino-4'-hydroxy-diphenylamine, indophenol, and finally above-named base. The steps are described. In German.

PB L 67305. I. G. FARBENINDUSTRIE A. G. Method for producing "Immedialrotbraun CL 3 R". (TEA-Büro Report). (Enlargement Print of Frames 1867-1869 of FIAT Microfilm Reel C 186, PB 25626). Apr 1927-Sep 1938. 22 p. Price: Microfilm-$1.00 - Photostat-$2.00
This folder contains descriptions of the processes for a number of dyes and dye bases, as described below: (1) "Immedialrotbraun CL 3 R" is produced by sulfurization of 1, 2, 4-trichloro-7-methyl-3-keto-isophenothiazine in polysulfide solution. The latter base is obtained by the reaction of chloranil with the zinc salt of 3,4-mercaptoaminotoluene. (2) "Katigenbraun R" is prepared by sulfurization of 1, 8-dinitronaphthalene. A laboratory method only is described. (3) "Katigen Gelbbraun GR extra" is produced by sulfurization of dinitroacetanilide and dinitrotoluene. (4) "Katigen Rotbraun 3 R" is produced by sulfurization of "Bordobase VL", prepared from toluenediamine and p-aminophenol. (5) "Katigen Rotbraun 9 R extra" is produced by sulfurization of "Bordobase K" which is obtained from 2,4-toluenediamine and dichloro-p-amino-phenol. (6) "Kryogenbraun ROON" is produced by sulfurization of 3,6-diamino-2, 7-dimethyl hydroacridine. (7) "Schwefelbraun CL 4 R" is produced by sulfurization of 4'-methyl-4-hydroxy-diphenylamine. In German.

PB L 67304. I. G. FARBENINDUSTRIE A. G. "Katigen Direct Blue B". (TEA-Büro-Report). (Enlargement Print of Frames 1870-1918 of FIAT Microfilm Reel C 186, PB 25626). Dec 1922 - Mar 1936. 49 p. Price: Microfilm-$1.00 - Photostat-$4.00
The first part of this folder is made up of two reports in English, originating with West Works, Grasselli, N. J. The first of these describes the results of experiments for an improved process for "Katigen Direct Blue B" - by thionation of dinitrohydroxydiphenylamine - still in the laboratory stage. The second document is the 1922 "Annual Report on the Manufacturing Processes of Sulphur Colors". It relates experiences with and improvements of the processes for various dyes without, however, disclosing the entire processes used. This is followed by the following process descriptions, in German; all involving thionation: (1) "Immedialdirekthlau RL extra", from 2,4-dinitro-4'-hydroxy diphenylamine; (2) "Immedial Grünblau GV" from a mixture of 1,6 and 1,7 Cleve's acid; (3) "Immedial Indogen GCL conc." and (4) "Immedial Indogen RCL conc." from quinone dimethyl anilineimine; (5) "Immedial Indogen RRCL conc." from "I.I.RCL" above; (6) "Immedial Indon RR extra" from "Immedial Violett base R"; (7) "Immedial Indon RR conc." from p-hydroxy-p-amino-methyldiphenylamine; (8) and (9) "Immedialneublau 3 GL extra", and "RL extra", both from their corresponding bases, not further explained, (10) "Immedialneublau FBL extra" from its base, obtained from diphenylamino monosulfonic acid and p-aminophenol by oxidation; (11) "Katigen Chromblau 5 G" from "Blaugrünbase" consisting of naphthylamine-6-sulfonic acid and p-aminophenol; (12) "Thiogen Neublau 3 GL" from phenylanthranilic acid and nitrosophenol; or from indophenol carboxylic acid; (13) "Thiogen Neublau BL" from diphenyl amine sodium monosulfonate and p-aminophenol. Coded versions, of apparently identical contents, are added for the two last-named dyes. In English and German.

PB L 67303. I. G. FARBENINDUSTRIE A. G. Method for producing indophenol carboxylic acid. (TEA-Büro Report). (Enlargement Print of Frames 1919-1920 of FIAT Microfilm Reel C 186, PB 25626). Oct 1931. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
This substance of molecular weight 320 is produced from diphenylamine-o-carboxylic acid and nitrosophenol. The method is described. Yield is 92% of the theoretical. In German.

PB L 67302. I. G. FARBENINDUSTRIE A. G. Method for producing "Oxytriphenylbase JBNS". (TEA-Büro Report). (Enlargement Print of Frames 1921-1923 of FIAT Microfilm Reel C 186, PB 25626). Oct 1931. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
A complete description of the process is given, comprising sulfonation of diphenylamine, cleavage, condensation with azole, neutralization and precipitation. The yield is about 82% of the theoretical. Tests are described. In German.

PB L 67301. I. G. FARBENINDUSTRIE A. G. Method for producing "Immedial brillantgrün B extra". (TEA-Büro Report). (Enlargement Print of Frames 1924-1936 of FIAT Microfilm Reel

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C 186, PB 25626). Apr 1927-Oct 1931. 13 p. Price: Microfilm-$1.00 - Photostat-$1.00
This folder contains descriptions of processes for the following sulfur dyes and bases: "Immedial brillantgrün B extra" from "phenyl 1,8-indophenol"; "Immedial brillantgrün 847" from anisyl-1,8-naphthylamine-sulfonic acid; "Grünbase A" from anisyl-naphthylamine-8-sulfonic acid and p-aminophenol; "Grünbase MPV" from methylperimidine and p-aminophenol; "Immedial Dunkelgrün B" from "Immedial Dunkelgrün B Rohschmelze", "Immedial Dunkelgrün BFT Rohschmelze" from p-aminophenol; "Immedial Gelbolivebase G" from m-toluenediamine, p-nitroaniline and p-phenylenediamine; "Immedial Gelbolive G" from above base; "Immedial Olive B" from "Immedial Dunkelgrün B-Rohschmelze" and "Thiobase R"; "Katigen Grün MK extra" from "K base" and "Methylperinidin-Grünbase MPK"; "Tiefgrünbase N.V." from naphthylamine and p-aminophenol; "Katigen Tiefgrün G extra" conc. from "K base" and "Naphthylamin-Grünbase NK". Also a description of the oxidation of methylperinidine and p-aminophenol by means of potassium bichromate. In German.

PB L 67300. SCHULZE and others. Process for "Immedialcarbon B". (TEA-Büro Report). (Enlargement Print of Frames 1937-1999 of FIAT Microfilm Reel C 186, PB 25626). Sept 1926-May 1939. 63 p. Price: Microfilm-$2.00 - Photostat-$5.00
This folder contains descriptions of processes for black sulfur dyes. Many of the processes are similar or partially identical, the differentiation occurring in the last step, the processing of the melt. The following dyes are produced from dinitrochlorobenzene: "Immedialcarbon B" "-BF", "-FL", "-RR", "Immedialschwarz MO", "-ML", "-MFRD", "-MGD", "-RFL", and "-Textra"; also "Schwefelschwarz I extra". The following are produced from "W base": "Indocarbon CL", "-CLG", "-CLN" and "-IR-suprafix". The process for "W base" itself, from β-naphthol and p-aminophenol, is also described. "Indocarbon SN" is made from "CR base". - The determination of sodium sulfide in black sulfur dyes is described. Technical tests for these dyes are described. Experiments on the use of anhydrous sodium polysulfide and sodium sulfide are reported. In German.

PB L 67299. MANSFELD. Directions for producing "Algolgelb GC". (I. G. Farbenindustrie - TEA-Büro Report). (Enlargement Print of Frames 2000-2013 of FIAT Microfilm Reel C 186, PB 25626). Mar 1930-May 1936. 14 p. Price: Microfilm-$1.00 - Photostat-$1.00
This dye, 1,2-anthraquinone-5,6-bis-phenylthiazole, is obtained from 2,6-diaminoanthraquinone. Directions for the production of various specifications and grades of this dye are given here. In German.

PB L 67298. I. G. FARBENINDUSTRIE A. G. Method for technical production of "Algolorange RF". (TEA-Büro Report). (Enlargement Print of Frames 2044-2059 of FIAT Microfilm Reel C 186, PB 25626). Sep 1938. 45 p. Price: Microfilm-$1.00 - Photostat-$3.00
This dye is produced from p-phenetidine, intermediates being "Orange anhydride", "Orange cyanic acid", "Orange hydroxythionaphthene". The production processes and apparatus are described in great detail. Pieces of equipment are numbered 1a to 87b, apparently referring to drawings not reproduced here. This is followed by complete directions for producing "Orangeamid", (2-carboxyamide-5 ethoxybenzene-1-thioglycolic acid). Starting material is 1-cyano-4-ethoxybenzene-2-sodium sulfonate; see PB 67297. The yield is 83% of the theoretical. In German.

PB L 67297. I. G. FARBENINDUSTRIE A. G. Directions for producing 2-cyano-5-ethoxybenzene 1-sulfonic acid("o-cyansulfosäure"). (TEA-Büro Report). (Enlargement Print of Frames 2060-2068 of FIAT Microfilm Reel C 186, PB 25626). Sep 1938. 9 p. Price: Microfilm-$1.00 - Photostat-$1.00
The production of this intermediate is described completely. p-Phenetidine sulfonic acid is diazotized and reacted with cuprous cyanide in bicarbonate solution. Sodium tetrasulfide precipitates the copper as copper sulfide and at the same time acts as a detoxicating agent for the excess cyanide. The yield is 75% of the theoretical amount. Description of apparatus apparently refers to drawings, not reproduced here. In German.

PB L 67296. FISCHER, I. Technical method for producing "Indanthrenbrillantrosa R". (I. G. Farbenindustrie - TEA-Büro Report). (Enlargement Print of Frames 2069-2099 of FIAT Microfilm Reel C 186, PB 25626). Apr 1929-Jul 1932. 31 p. Price: Microfilm-$1.00 - Photostat-$3.00
The production of this dye, starting from o-tolnidine hydrochloride, is described in great detail, with complete description of the apparatus used in each step. Directions for producing "Indanthrenbrillantrosa R Suprafix" are also present. In German.

PB L 67295. I. G. FARBENINDUSTRIE A. G. Method for producing "Algolorange RF Suprafix" paste. (TEA-Büro Report). (Enlargement Print of Frame 2100 of FIAT Microfilm Reel 186, PB 25626). May 1932. 1 p. Price: Microfilm-$1.00 Photostat-$1.00
The processing of "Leuko-Algolorange" to obtain the dye is described. The process for producing the leuco-compound is not described here. In German.

PB L 67294. I. G. FARBENINDUSTRIE A. G. Directions for producing "Indanthrenbrillantrosa R", "Indanthrendruckrotviolett RRN" and "Algolorange RF". (TEA-Büro Report). (Enlargement Print of Frame 2101 of FIAT Microfilm Reel C 186, PB 25626). May 1935. 1 p. Price: Microfilm-Photostat-$1.00
Production of these dyes in fine powder form for pointing from the corresponding leuco-compounds is described. The production of the latter is not disclosed here. See PB 67293 below for "Leuko-Algolorange RF". In German.

PB L 67293. I. G. FARBENINDUSTRIE A. G. Method for producing "Algolorange RF Suprafix" double paste. (TEA-Büro Report). (Enlargement Print of Frames 2102-2103 of FIAT Microfilm Reel C 186, PB 25626). Mar 1937. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
Directions for the production of the paste from "Leuko-Algolorange RF" are given. The process for producing the leuco-compound is also described, but the nature of the dye used in its preparation is not disclosed. In German.

PB L 67292. I. G. FARBENINDUSTRIE A. G. Directions for producing "Algolorange RF Suprafix". (TEA-Büro Report). (Enlargement Print of Frames 2104-2105 of FIAT Microfilm Reel C 186, PB 25626). May 1932-Oct 1934. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
Two sets of directions for producing a paste of this dye from "Leuko-Algolorange RF" are given. The production of the leuco-compound is described in PB 67293 above. In German.

PB L 67291. I. G. FARBENINDUSTRIE A. G. Methods for producing "Indanthrenbrillantrosa R" and "Leuko-Indanthrenbrillantrosa R" and "Leuko-Indanthrenbrillantrosa R". (TEA-Büro Report). (Enlargement Print of Frames 2106-2107 of FIAT Microfilm Reel C 186, PB 25626). Jan 1936. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
Directions for producing, from the leuco compound, two specifications of the dye in powder form (1) for use on viscose only, are given. The production of the leuco-compound is described, but the composition of the dye used in its preparation is not disclosed here. In German.

PB L 67290. I. G. FARBENINDUSTRIE A. G. Methods for producing "Algolorange RF Suprafix" and "Leuko-Algolorange RF". (TEA-Büro Report). (Enlargement Print of Frames 2108-2109 of FIAT Microfilm Reel C 186, PB 25626). Jan 1936. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
Directions are given for producing the dye in powder form (1) for use on either cotton or viscose, (2) for use on viscose only. The production of the leuco compound is described without, however, disclosing the composition of the dye used in it. In German.

PB L 67289. I. G. FARBENINDUSTRIE A. G. Direction for producing "Indanthrenbrillantrosa R Suprafix". (TEA-Büro Report). (Enlargement Print of Frame 2110 of FIAT Microfilm Reel C 186, PB 25626). Oct 1934. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
The production of this dye from the corresponding leuco compound is described. For the latter see PB 67288.

PB L 67288. I. G. FARBENINDUSTRIE A. G. Directions for producing "Leuko-Indanthrenbrillantrosa R". (TEA-Büro Report). (Enlargement Print of Frame 2111 of FIAT Microfilm Reel C 186, PB 25626). Oct 1934. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
The process is described in detail. The composition of the dye used in its preparation, however, is not disclosed here. In German.

PB L 67287. I. G. FARBENINDUSTRIE A. G. Directions for producing "Leuko-Algolorange RF". (TEA-Büro Report). (Enlargement Print of Frame 2112 of FIAT Microfilm Reel C 186, PB 25626). Oct 1934. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
The description given here is almost identical with the one in PB 67293, of March 1937. In German.

PB L 67286. I. G. FARBENINDUSTRIE A. G. Directions for producing technical leuco-pastes and "Suprafix" pastes. (TEA-Büro Report). (Enlargement Print of Frames 2113-2117 of FIAT Microfilm Reel C 186, PB 25626). Jul 1933. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
This item contains general directions for making leucopastes, applicable to (1) "Indanthrenbrillantrosa R", (2) "Algolorange RF", and (3) "Indanthrenrotviolett RRN". These are followed by specific directions for producing the "Suprafix pastes" of (1) and (2), general directions converning "Algolscharlach-Suprafix" pastes - using various proportions of (1) and (2) "Suprafix" - and specific directions for producing "Indanthrenscharlach F3G Suprafix". In German.

PB L 67285. I. G. FARBENINDUSTRIE A. G. Ring closure of "Algolorangeamid" to hydroxythionaphthene carboxylic acid, and oxidation to the dye. (TEA-Büro Report). (Enlargement Print of Frames 2118-2119 of FIAT Microfilm Reel C 186, PB 25626). May 1931. 2 p. Price: Microfilm-$1.00-Photostat-$1.00
The old method and a newer simplified method are described. In German.

PB L 67284. TRAUTNER, W. Directions for producing "Heliochtrosa RL" - also called "Algolrosa R" - paste and powder. (I. G. Farbenindustrie - TEA-Büro Report). (Enlargement Print of Frames 2120-2127 of FIAT Microfilm Reel C 186, PB 25626). Nov 1929. 8 p. Price: Microfilm-$1.00 - Photostat-$1.00
This dye is obtained from "Algolrosa R base" (see below) by recrystallization from sulfonic acid to obtain fine crystals, and purification by chlorination. The method is described in detail. The production of "Algolrosa R base" also is described completely. It is 1-hydroxy-4-benzoylaminoanthraquinone, and is obtained by benzoylation of 1 hydroxy-4-aminoanthraquinone (called "Para S"). In German.

PB L 67283. I. G. FARBENINDUSTRIE A. G. Method of standardisation of "Indanthrenrotviolett 2RN" powder and "Algolscharlach 3B" powder. (TEA-Büro Report). (Enlargement Print of Frames 2128-2131 of FIAT Microfilm Reel C 186, PB 25626). Mar 1932. 4 p. Price: Microfilm-$1.00-Photostat-$1.00
The directions are given in code and, in a second copy, in open language. The amounts of "Algosol", "Mekal", and dextrine added to the dyes are given. In addition to the ones mentioned in the title, the standard mixtures for technical powders of "Indanthrenbrillantrosa R" and "Algolorange RF" are given. In German.

PB L 67282. I. G. FARBENINDUSTRIE A. G. Indanthrene yeller dyes and intermediates. (TEA-Büro Report). (Enlargement Print of Frames 2132-2207 of FIAT Microfilm Reel C 186, PB 25626). Aug 1930-Jul 1939. 74 p. Price: Microfilm-$2.00 - Photostat-$5.00
The first item in this folder is a preliminary report on experiments for a new process for "Indanthrendruckgelb GGN" by chlorination and bromination of the melt of "Indanthrengoldgelb GK". It is followed by these process descriptions: "Indanthrengelb 5GK base" made by condensation of two molecules α-amino-anthraquinone with isophthalylchloride. "Indanthrengelb GF" from β-methyl anthraquinone and "benzidinbase". "Indanthrengoldgelb GKN" by chlorination and bromination of "Indanthrengoldgelb GK". "Indanthrengelb GT" from "Trichlorobenzol extra" and β-amino anthraquinone. "Indanthren Gelb G Chrom" from "Gelb G S Chrom". "Indanthrengelb 6 GF" from naphthosultasphenazine and 2,3-dichloronaphthoquinone. The purification of 1-amino-anthraquinone with sulfic acid is described. "Indanthrene Gelb GS Chrom" is made from "Ind. Gelb GT" powder and sodium bichromate. The production of 1-amino anthraquinone from arsenic acid and ammonia is briefly described. The chlorination of β-amino anthraquinone to 1-chloro-2-amino anthraquinone is described in detail. Indanthrengelb G (flavanthron) is produced by hydrolysis of diquinylphthalide powder free of copper, to diaminodianthraquinonyl which then closes the ring. In German.

*PB L 76269. KERN, J. G. and others. Methods of standardisation of vat dye powders "fine" and celanese dyes at I.G. Farbenindustrie A.G., Ludwigshafen. (FIAT Final Rept 1040). Apr 1947. 45 p. Price: Mimeo-$1.25
Vat dye powders "Fine" and Celanese dyes are standardised at the Ludwigshafen plant of the I.G. Farbenindustrie A.G., by two different methods. One method is applied to those products that can only be dispersed with especially thorough mixing of dyestuff and assistants, and the other method is applied to those products that are readily dispersed and in all cases to those dyestuffs, principally azo celanese colors, which tend to ignite relatively readily. The first method, applied mainly to the standardisation of vat dye powders "Fine", involves an initial mixing of dye press cake with dispersing agents. This is followed by a partial drying of the slurry, so obtained, on a drum dryer to form a cake containing about 10% water. This cake is than kneaded with water in a doughmixer to give a stiff paste containing 25% water. The paste is run over a 5-roll machine to give a thin flake. This flake is dried on a traveling screen dryer and ground and mixed to type strength in conventional equipment. The second method which is used mainly for celanese dyestuffs involves a slurrying and wet grinding of press cake by circulation through a coarse screen and wet grinding mill until a product with satisfactory dispersion characteristics is obtained. The dispersed slurry is spray dried in a Krause dryer and finally mixed without grinding and reduced to type strength.

*PB L 76276. KERN, J. G. and others. Methods of standardisation of vat dye suprafix pastes and powders "fine" manufactured by I.G. Farbenindustrie A.G., Höchst. (FIAT Final Rept 970). Apr 1947. 31 p. Price: Mimeo-$1.00
Vat dye pastes are standardised at the Höchst plant of the I.G. Farbenindustrie A.G., by a thorough mixing of crude color press cake with assistants, followed by an adjustment to type strength and fine screening. If the wet dye paste is to be used for preparation of powders "fine" it is spray dried at low temperature. Grinding and mixing of powders "fine" is effected in conventional equipment with the incorporation of reduction materials into the finished product. Formulas for type vat dye pastes and powders "fine" as well as standard methods of testing these dyestuffs are included in this report. These formulas show in detail the composition of the finished products together with the identification of all assistants and reduction materials used in their standardization. Two flowcharts are included.

Agricultural Chemicals

PB L 78644. BRAGDON, ROBERT I. and SHEARD, JOHN L. Comparative study and evaluation of the crystallisation and

setting point methods for analysis of DDT. (Mass Institute of Technology Memo Rept 194). Oct 1945. 37 p. Price: Microfilm-$1.00 - Photostat-$3.00

The analyses of known synthetic mixtures of DDT by the crystallization method, modified by a melting point correction, showed a maximum deviation of 2 percent and an average deviation of 1 percent, when the p,p'-DDT content was over 60 percent. Below 60 percent of the active isomer, the difference between the actural and measured p,p'-DDT content became increasingly apparent. The analyses of two samples of commercial DDT by this method agreed within 1-2 percent with previous assays by NDRC groups. Sixty-six additional commercial samples of DDT were analysed for p,p'-DDT content by this method. The setting points of sixty-six commercial samples of DDT were plotted against the p,p'-DDT content, as determined by the crystallization method. Below p,p'-DDT contents of 76 percent the setting points of the samples could not be correlated with the percentage of active isomer. Above this content there were insufficient data to define conclusive relationship. The modified crystallization method was recommended for the assay of commercial DDT. Bibliography.

PB L 78702. BYERRUM, RICHARD and DUBOIS, KENNETH P. Influence of diet on the susceptibility of rats to alpha-naphthylthiourea. n. d. 22 p. Price: Microfilm-$1.00 - Photostat-$2.00

Preliminary studies in this library have shown that the addition of iodine to the diet or drinking water affords considerable protection to the rat against alpha-naphthylthiourea (ANTU) provided that the iodine is administered prior to ANTU. The present study was carried out to obtain further information on the protective effect of iodine and to ascertain the influence of variations in such dietary constituents as fat, carbohydrate, protein, and cystine on the susceptibility of rats to ANTU. The results indicate that variations in dietary carbohydrate, fat, and protein had no effect on the susceptibility of rats to ANTU except when low protein diets, inadequate for growth, were fed. Tables and bibliography are included. Report from the University of Chicago. The work was carried out under contract with the Medical Division of the Chemical Warfare Service.

PB L 78710. DIEKE, SALLY H. and others. The acute toxicity of thioureas and related compounds to wild and domestic Norway rats. n. d. 27 p. Price: Microfilm-$1.00 - Photostat-$2.00

Following the observation that phenyl thiourea has a high acute toxicity to the Norway rat, a systematic investigation was undertaken, with the purpose of finding some related compound which would serve as a practical rodenticide. Such a substance was found, namely alpha-(or 1-) naphtyl thiourea (ANTU), which proved very efficacious as a field poison for Norway rats. The present report summarizes the toxicity data obtained in the course of the screening, which was first performed with laboratory rats and later extended to trapped wild Norway rats. Tables and bibliography are included. Report from the Psychobiological Laboratory, the Johns Hopkins University, Baltimore, Maryland.

PB L 80328. DOVE, W. E. Louse powder. OSRD Contract symbol M-920. n. d. 7 p. Price: Microfilm-$1.00 - Photostat-$1.00

The report gives the composition and specifications for a louse powder containing 0.2% of 20% pyrethrum extract, 2% N-isobutyl undecylenamide ("IN 930"), 1% "Phenol S", 2%-2,4-dinitroanisole, and enough pyrophyllite ("Pyrax ABB") sufficient to make 100%. The Orlando number and the source of a number of insecticides are listed.

PB L 78709. GOLDENSON, JEROME and SASS, SAMUEL. Estimation of benzil and phenoxathiin in impregnated clothing. (CWS Tech Div Memo Rept 1309). n. d. 32 p. Price: Microfilm-$1.00 - Photostat-$3.00

Procedures were evolved for estimation of benzil in cloth as follows: (1) By ultraviolet absorption measurements at 260 millimicrons using a Beckman spectrophotometer; (2) gravimetrically by conversion to and weighing as benzil 2, 4-dinitrophenylhydrazone; and (3) visible color estimation by transmission measurements at 400-465 millimicrons using a Klett-Sumerson photoelectric colorimeter. A procedure was evolved for estimation of phenoxathiin (Orlando No. 37) by ultraviolet absorption measurements at 236 millimicrons using a Beckman spectrophotometer. Further work on phenoxathiin was stopped when a report was received from the Food and Drug Administration stating the compound was unsafe for skin application. Several graphs and a bibliography are included.

PB L 73699. I.G. FARBENINDUSTRIE A.G., LUDWIGSHAFEN, GERMANY. Laboratory reports in agricultural chemistry. (PIAT Microfilm Reel F 234, Frames 4273-4601) 1933-1946. 329 f. Price: Microfilm-$4.25 - Enlargement Print-$33.00

This reel was prepared by PIAT investigators in Germany. 32 individual items are listed below and will be available as enlargement prints. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
4273-4276 PB L 73699	The vitamin C content of differently stored apples. May 23, 1941. In German.	$1.50
4277-4284 PB L 73699	The influence of highly concentrated solutions of Chilean nitrate and calcium nitrate upon germination and upon growing grain plants. Jul 13, 1940. In German.	1.50
4285-4299 PB L 73699	Experiments on the practical significance of "Heteroauxins" for agriculture. Dec 8, 1939. In German.	1.50
4300-4302 PB L 73699	Experiments for the detection of pregnancy of animals according to Kustallow. Jan 7, 1939. In German.	1.50
4303-4307 PB L 73699	Experiments to delay the ripening of bananas. Apr 9, 1938. In German.	1.50
4308-4313 PB L 73699	Experiments with germinating plants treated with slaked lime of the Buna plant Schkopau. Jan 12, 1939. In German.	1.50
4314-4316 PB L 73699	Conversion experiments with two urea condensation products in different soils. Aug 3, 1938. In German.	1.50
4317-4321 PB L 73699	Informative experiments on the reaction of carbonyl diurea and methylene diureide in the soil and their utilization by plants. Dec 30, 1937. In German.	1.50
4322-4327 PB L 73699	A simple method for the determination of lactic acid in ensilage. Mar 8, 1937. In German.	1.50
4328-4340 PB L 73699	The reliability of the 10 day weather forecasts issued by Prof. Baur (Hamburg, summer 1936). Feb 15, 1937. In German.	1.50
4341-4368 PB L 73699	The influence of different inorganic and organic compounds upon proteolysis. Mar 28, 1936. In German.	3.00
4369-4373 PB L 73699	The influence of blast-furnace slag upon carbon dioxide formation in soil, nitrification and germination of wheat. Nov 9, 1936. In German.	1.50
4374-4382 PB L 73699	Examinations on the urease action of extracted coarsely ground soy beans and their reaction with mixtures of concentrated feed containing urea. Jul 29, 1936. In German.	1.50

4383-4401 PB L 73699 — The importance of mustard oil in plants and its inhibiting effect on proteolysis. Mar 17, 1936. In German. 2.00

4402-4414 PB L 73699 — The importance of mustard oil in plants, with a special chapter on the inhibiting action of mustard oil on proteolysis. Jan 22, 1936. In German. 1.50

4415-4420 PB L 73699 — The problem of nitrogen fertilization of pastures. Determination of the number of germs in pasture areas after fertilization with dung water and lanna saltpeter. Mar 3, 1933. In German. 1.50

4421-4426 PB L 73699 — Germination and nitrification experiments with a radioactive substance. Oct 6, 1932. In German. 1.50

4426-4429 PB L 73699 — Informative experiments with iron carbonyl to avoid fatigue of the soil. Jul 12, 1932. In German. 1.50

4430-4432 PB L 73699 — The fertilizing effect of "Trolan" powder. (phenolic synthetic resin). May 11, 1932. In German. 1.50

4433 PB L 73699 — This frame number is missing.

4434-4436 PB L 73699 — Nitrification experiments with 11 fertilizers from sulfite waste liquors. Apr 27, 1932. In German. 1.50

4437-4452 PB L 73699 — The problem of protein supply. Aug 28, 1945. In German. 2.00

4453-4479 PB L 73699 — Aromatic compounds, especially nitro and amino substitution products of benzoic acid and salicylic acid, as preservatives. Jan 4, 1944. In German. 3.00

4480-4491 PB L 73699 — Survey on efficient solid scatterable preservatives for green feed. Jul 29, 1943. In German. 1.50

4492-4505 PB L 73699 — Testing of scatterable products as preservatives for ensilage. (Experiments from 1941). Jun 24, 1942. In German. 1.50

4506-4514 PB L 73699 — Ensilage preservation 1939 (comparative experiments with scatterable additions). Nov 28, 1939. In German. 1.50

4515-4533 PB L 73699 — The formic acid content in ensilage specimens and the "formic acid error" in the determination of acetic, butyric, and lactic acid. Apr 21, 1939. In German. 2.00

4534-4545 PB L 73699 — Examinations on the bacteria preparation "Aceta normal". Nov 7, 1938. In German. 1.50

4546-4558 PB L 73699 — Preservation of green feed 1937/38. Aug 29, 1938. In German. 1.50

4559-4589 PB L 73699 — Fermentative protein decomposition in the preparation of ensilage. Jul 29, 1938. In German. 3.50

4590-4601 PB L 73699 — A system for the evaluation of ensilage samples. Dec 30, 1937. In German. 1.50

PB L 73699-S. I.G. FARBENINDUSTRIE A.G., LUDWIGSHAFEN, GERMANY. Laboratory reports in agricultural chemistry. (FIAT Microfilm Reel F 234, Frames 4273-4601, abstract cards) 1933-1946. 49 p. Price: Microfilm-$1.00 - Photostat-$4.00

Brief abstracts of the individual items on the above reel, F 234, PB 73699, prepared by FIAT personnel in Germany.

*PB L 78244. MARTIN, H. and SHAW, H. Developments in methods and materials for the control of plant pests and diseases in Germany. (BIOS Final Rept 1095, Item 22). Mar 1947. 96 p. Price: Microfilm-$2.00 - Photostat-$7.00
In May and June, 1946, certain industrial organizations and research stations in the British and American zones of Germany and in Berlin were visited for the purpose of collecting information on developments in plant protective materials and methods during the war period. Attention was given only to developmental research and to field use, and no investigation was made into the manufacture of insecticides and fungicides. In all, sixteen targets were visited including two research stations in Switzerland. This document includes several reports on the manufacture and tests of certain chemical compounds and a list of German technical literature on plant pathology.

Inorganic Chemicals

PB L 85408. SHIRAISHI KOGYO KAISHA, LTD. and NIYO KOGYO KABUSIKI KAISHA, TOKYO, JAPAN. Hakuenka manufacturing process. 1935-1939. 70 p. Price: Microfilm-$2.50 - Photostat-$7.00
This folder contains a one-page summary of the above process, dealing with the conversion of native Japanese limestone into a product of colloidal calcium carbonate impregnated with an esterized fat or fatty oil and known by the trade name "Hakuenka." One flow sheet is attached. The folder contains also two pamphlets describing properties, uses, and kinds of "Hakuenka," and two pamphlets on "Colloical." The latter product, produced by Niyo Kogyo K. K., is a colloidal inorganic nutriment for domestic animals and poultry feed (colloidal calcium carbonate). In English.

Ordnance Chemicals

PB L 85499. JOHNSON, LESTER E. Report of inspection of pentaerythritol plant near Lippoldsberg, Kurhessen. Oct 1945. 12 p. Price: Microfilm-$1.25 - Photostat-$2.00
Some details are given of the production of pentaerythritol by the condensation of acetaldehyde with formaldehyde. The crystallization, purification and drying are also described. The plant, which was owned by Montan Industriewerke G.m.b.H., had a design capacity of 250 metric tons of pentaerythritol per month. To support this production, a monthly production of 300-350 tons formaldehyde was provided for. The formaldehyde was prepared by the oxidation of methanol, involving the use of a copper catalyst. The whole plant, however, was erected as a stand-by to three other similar plants and operated only during a six-week period in November and December, 1944, at 25% capacity. The report describes the buildings and equipment of the plant which occupies a fenced-in area of 1 square kilometer. A map showing the plant buildings is included. Because of the plant layout, it was recommended that the equipment be offered for reparations or converted for the production of essential consumer materials, and the buildings destroyed. The inspection was made for the Office of Military Government, U.S. Zone.

PB L 20075. KISTIAKOWSKY, G. B. Detonation and deflagration of solids. n. d. 3 p. Price: Microfilm-50¢ - Photostat-$1.00

* PB L 78227. MAXWELL, W. R. and others. Report on pyrotechnic firms and personalities. Part I, II, III. (BIOS Final Rept 304, Item 17). Mar 1946. 36 p. Price: Microfilm-$1.00 - Photostat-$3.00

Ordnance Chemicals (contd)

Eighteen plants or individuals were visited concerning their products and processes. The report includes mention of several pyrotechnic compositions for shells, tracers, propellants, flares and smokes.

* PB L 34005-S. U. S. FIELD INFORMATION AGENCY, TECHNICAL. The manufacture of chlorosulfonic acid at I.G. Farbenindustrie A.G., Hoechst. (Supplement to PB 34005). (Tech Bulletin F 12). Mar 1947. 3 p. Price: Mimeo-$0.25

A brief description of the production of chlorosulfonic acid is given in BIOS Final Report 243, PB 34005, v. 2, p. 939, of this Bibliography and also in CIOS Report, File XXVI-11, item 22, PB 218, v. 1, p. 8, of this Bibliography. The present report gives some details on the raw material, operation, equipment and yield in the production of Nebelsäure (Fog acid) which was a war product used for chemical smokes, composed of approximately 50% sulfur trioxide and 50% chlorosulfonic acid (or 84% SO_3 and 16% HCl). No information is given on the production of chlorosulfonic acid (70% SO_3 and 30% HCl) since the operation of the chlorosulfonic plant is in no way unusual.

Analytical Chemistry

PB L 78697. BUEHLER, HENRY J. and others. The elemental and amino acid composition of crystalline Clostridium botulinum type A toxin. n. d. 15 p. Price: Microfilm-$1.00 - Photostat-$1.00

The elemental and amino acid compositon of crystalline botulinus type A toxin is presented. The hydrolysis of 100 mg of the protein yields 115.74 mg of amino acids or 100.24 mg of amino acid residues. From the cysteine and cystine data, a minimum molecular weight of approximately 45,000 has been calculated which is one twentieth of the molecular weight of 900,000 determined by physical means. Empirical formulas showing the elemental proportions and amino acid proportions are presented. No explanation can be given for the extreme toxicity of the protein from the analytical data. The data indicate that the amino acids are biologically active and connected through peptide bonds. Tables and bibliography are included. Report was submitted to Journal of Biological Chemistry.

PB L 80814. KONIAKOWSKI, LOTHAR. A new quantitative thorium separation and thorium titration. (A German document). (FIAT MCF 435). May 1947. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00

Thorium is quantitatively precipitated from a concentrated hydrochloric solution by means of oxalic acid. After filtration and washing, the precipitate is dissolved in water which contains sulfuric acid. The thorium is then indirectly determined by titration with $\frac{n}{20}$ potassium permanganate solution. In German.

PB L 78701. REDEMANN, C. ERNST and others. The volatility and vapor pressure of eight 2-chloroethyl alkyl (or cycloalkyl) sulfides. n. d. 13 p. Price: Microfilm-$1.00 - Photostat-$1.00

The volatility of eight 2-chloroethyl alkyl (or cycloalkyl) sulfides have been measured between 0° and 60° by a transpiration method. Vapor pressures have been calculated from the volatility measurements, and using these values logarithmic equations have been calculated for both the volatility and the vapor pressure of these compounds. The mean molar latent heat of evaporation has been calculated from the derived vapor pressure equation for each compound. The probable error of these determinations over the temperature range 0° to 60° is estimated to be ± 1 to 2%. The equations may be used for extrapolating to temperatures outside these limits with somewhat larger errors. Tables, sketches of equipment, and bibliography are included. Report from the University of Chicago Toxicity Laboratory.

PB L 73683. VIENNA. UNIVERSITY. Doctors' theses in organic and analytical chemistry. (FIAT Microfilm Reel Q 3, Frames 1784-3030). 1936-1945. 1147 f. Price: Microfilm-$6.00 - Enlargement Print-$115.00

This reel was prepared by FIAT investigators in Europe. 15 individual items are listed below and will be available as enlargement prints. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
1784-1848 PB L 73683	Determination of lead, uranium, and thorium in zirconium silicates with regard to the geological measurements of time. 1939. In German.	$6.50
1849-1896 PB L 73683	A new method for the production of lactic acid aldehyde of an inactive and optically active form. 1939. In German.	5.00
1897-1986 PB L 73683	Determination of the constitution of vegetable coumarin derivatives and synthesis of tobacco alkaloids. 1939. In German.	9.00
1987-2079 PB L 73683	Investigations of stilbene derivatives with estrogenic effects. 1945. In German.	9.50
2080-2127 PB L 73683	Determination of the constitution of the alkaloid calycanthine. 1945. In German.	5.00
2128-2188 PB L 73683	Determination of the constitution of picrolichenine and preparation of chloroacetophenone and glycolic acid derivates. 1940. In German.	6.50
2189-2280 PB L 73683	Discovery of new coumarins and new alkaloids of the mescal-buttons and determining their constitution as well as that of "Pcsaniculin". 1939. In German.	9.50
2281-2401 PB L 73683	Experiments for the preparation of compounds similar to diethyl stilbestrol. 1945. In German.	12.50
2402-2476 PB L 73683	New compounds of the nickel-hydrocyanic acid and some proofs by means of spot reactions. 1939. In German.	7.50
2477-2674 PB L 73683	The constitution of adenosinetriphosphoric acid. 1936-1938. In German.	20.00
2675-2705 PB L 73683	Preparation of colloidal gold solutions and investigation of the protective effect of purest proteins of purified gold sol. 1940. In German.	3.50
2706-2749 PB L 73683	Analysis of chrome iron ore. 1939. In German.	4.50
2750-2824 PB L 73683	Application of thioglycolic acid in quantitative analysis and the composition of complex compounds of iron and thioglycolic acid. 1939. In German.	7.50
2825-2910 PB L 73683	Constitution and synthesis of "Ayapin"; constitution of the acid of the galbanum resin (Galbaresensäure) and the constitution of homopterocarpine. 1939. In German.	9.00
2911-3030 PB L 73683	Syntheses and experiments in the coumarin series and analysis on the contents of Luvanga scandens Ham. 1939. In German.	12.00

PB L 73683-S. VIENNA. UNIVERSITY. Doctors' theses in analytical chemistry. (FIAT Microfilm Reel Q 3, Frames

Analytical Chemistry (contd)
1704-3030, abstract cards). 1936-1945. 20 p.
Price: Microfilm-$1.00 - Photostat-$2.00
Brief abstracts of the individual items on the above reel, Q 3, PB L 73683, prepared by FIAT personnel.

Miscellaneous Chemicals

PB L 70343. ANORGANA G.M.B.H., GENDORF, UPPER BAVARIA. A collection of reports on organic chemicals. (FIAT Microfilm Reel C-14, Frames 15188-16189. (See also FIAT Microfilm Reel C-13, PB 70342)). 1932-1943. 1001 f.
Price: Microfilm-$6.00 - Enlargement print-$100.50
This FIAT microfilm reel consists of 154 reports in the field of organic chemistry. Individual items are listed below and will be available as enlargement prints only; the entire reel may be purchased in microfilm form for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

Frames	Title	Price
15188-15189 PB L 70343	Commercial production of 2,7-dimethoxy anthanthrone. By Kunze. 1937. (Conclusion). In German. The beginning of this report is reproduced on reel C 13 (PB 70342), frames 15182-15187.	$1.50
15190-15193 PB L 70343	New indigoid dyes. By Heinrich. 1937. In German.	1.50
15194-15201 PB L 70343	Indigoid dyes from 5-methoxy isatins. By Albrecht. 1937. In German.	1.50
15202-15207 PB L 70343	Dyes of the alizarine indigo series. By Brunner. 1937. In German.	1.50
15208-15217 PB L 70343	Acid wool dyes of the anthraquinone series. By Heinrich. 1937. In German.	1.50
15218-15221 PB L 70343	Dyes of the "Bromaminsäure" (bromoaminoaniline sulfonic acid) series. By Heinrich. 1937. In German.	1.50
15222-15224 PB L 70343	Cotton dyes of the "Bromaminsäure" series. By Honold and Schultis. 1937. In German.	1.50
15225-15228 PB L 70343	Dibenzoanthanthrones. By Schütz. 1937. In German.	1.50
15229-15237 PB L 70343	Anthraquinone vat dyes with azo bridge bonds. By Honold and Schubert. 1938. In German.	1.50
15238-15345 PB L 70343	Alkyloxy, aryloxy, and aryl anthanthrones. By Kunze. 1938. In German.	1.50
15246-15249A PB L 70343	Preparation of dyes of the acedianthrone series. By Schwamberger. 1938. In German.	1.50
15250-15254 PB L 70343	Preparation of dyes of the "Isoimidgrün" series. By Scheyer and Schwamberger. 1938. In German.	1.50
15255-15259 PB L 70343	Dyes of the "Hydrondruckblau 3R" type having a second chromophoric group. By Schütz. 1938. In German.	1.50
15260-15265 PB L 70343	New indigosols. By Riedmair. 1938. In German.	1.50
15266-15271 PB L 70343	"Supranolblaus" of the "Bromaminsäure" series. By Fleischhauer. 1938. In German.	1.50
15272-15278 PB L 70343	New acetate rayon dyes of the anthraquinone series. By Heinrich. 1938. In German.	1.50
15279-15282 PB L 70343	Anthraquinone vat dyes with azo bridge bonds. By Riedmair. 1938. In German.	1.50
15283-15285 PB L 70343	Very dark brown vat dye of the "Indanthrenolivgrün" series. By Honold and Müller. 1938. In German.	1.50
15286-15288 PB L 70343	Dyes from aminonaphthalic acid. By Schwamberger. 1938. In German.	1.50
15289-15293 PB L 70343	Dyes of the phenylisatin series. By Krauss and Prister. 1938. In German.	1.50
15294-15296 PB L 70343	New vat gray of the thioindigo series. By Krauss. 1938. In German.	1.50
15297-15299 PB L 70343	Dyes of the naphthalene thionaphthene indigo series. By Brunner. 1938. In German.	1.50
15300-15303 PB L 70343	Acylamino anthraquinones from carboxylic acids of the cyanuric acid series. By Schubert and Honold. 1939. In German.	1.50
15304-15309 PB L 70343	New dyes of the "Indanthrenolivgrün" series. By Honold. 1939. In German.	1.50
15310-15314 PB L 70343	Dyes of the "Indanthrengelb 6 GD" type. By Ritter. 1939. In German.	1.50
15315-15321 PB L 70343	Anthralane dyes of the "Bromaminsäure" series. By Heinrich. 1939. In German.	1.50
15322-15328 PB L 70343	"Supranolblau" of the "Bromaminsäure" series. By Fleischhauer. 1939. In German.	1.50
15329-15334 PB L 70343	Dyes from phenyl anthraquinones. By Schütz and Ritter. 1940. In German.	1.50
15335-15338 PB L 70343	Vat dyes of the acylamino anthraquinone series. By Honold. 1940. In German.	1.50
15339-15342 PB L 70343	Vat gray of the "Indanthrenolivgrün" series. By Honold and Müller. 1940. In German.	1.50
15343-15348 PB L 70343	Dyes of the anthanthrone series. By Kunze. 1940. In German.	1.50
15349-15357 PB L 70343	Indigoid dyes with phenoxy groups. By Brunner. 1940.. In German.	1.50
15358-15361 PB L 70343	New dyes of the "Bromaminsäure" series. By Fleischhauer. 1940. In German.	1.50
15362-15376 PB L 70343	Anthralane dyes of the "Bromaminsäure" series. By Heinrich. 1940. In German.	1.50
15377-15379 PB L 70343	Verification of the British Patents 35513 and 35516 of CIBA concerning "manufacture of quinhydrones" and "improved process for printing textile products." By Oehwat. 1940. In German.	1.50
15380-15382 PB L 70343	2,3-Dichloro-1,4-naphthoquinone. By Prister. 1941. In German.	1.50
15383-15387 PB L 70343	Anthrasols from vat dyes of the "Indanthrenolivgrün" series. By Riedmair. 1941. In German.	1.50
15388-15392 PB L 70343	Du Pont patents concerning dyes of the "Indanthrenolivgrün" series. By Honold. 1941. In German.	1.50
15393-15396 PB L 70343	Studies on dyes of the anthrone series. By Ritter and Schwamberger. 1941. In German.	1.50

15397-15400 PB L 70343 "Supranol" dyes based on "Bromaminsäure". By Heinrich. 1941. In German. 1.50

15401-15409 PB L 70343 "Bromaminsäure" dyes. n.d. In German. 1.50

15410-15416 PB L 70343 Anthralane dyes of the "Bromaminsäure" series. By Heinrich. 1941. In German. 1.50

15417-15419 PB L 70343 Vat dyes of the acylamino and acridone anthraquinone series. By Honold. 1942. In German. 1.50

15420-15423 PB L 70343 New indigoid dyes (work done in 1939). By Albrecht. 1942. In German. 1.50

15424-15427 PB L 70343 Information on several anthrasols. By Riedmair. 1942. In German. 1.50

15428-15431 PB L 70343 Anthralane dyes of the "Bromaminsäure" series. By Heinrich. 1942. In German. 1.50

15432-15437 PB L 70343 Acid wool dyes of the anthraquinone series. By Heinrich and Riedmair. 1942. In German. 1.50

15438-15441 PB L 70343 "Supranolblaus" containing "Mepasin" groups. By Fleischhauer. 1942. In German. 1.50

15442-15443 PB L 70343 "Anthrasolbraun IVD." By Ochwat. 1942. In German. 1.50

15444-15445 PB L 70343 3-Chloro-toluene-6-thioglycolic acid. By Frister. 1942. In German. 1.50

15446-15453 PB L 70343 Dinaphthones and dehydro dinaphthylene diimines. By Rieche. 1936. In German. 1.50

15454-15455 PB L 70343 Agreement on indigosol between Durand I. G. and I. Cl. By Redies. 1932. In German. 1.50

15456-15460 PB L 70343 On the arrangement of substituents in condensations with aluminum chloride. By Rieche. 1937. In German. 1.50

15461-15464 PB L 70343 New anthrapyridones. By Reddelien. 1937. In German. 1.50

15465-15466 PB L 70343 Hydrocarbons with high molecular weight from methylketones. By Reddelien. 1937. In German. 1.50

15467-15471 PB L 70343 New synthesis of 9,10-dihydroacridines. By Ullmann. 1938. In German. 1.50

15472-15474 PB L 70343 Preparation of decacyclenes. By Card. 1939. In German. 1.50

15475-15485 PB L 70343 Preparation and use of the tylose brands. 1936. In German. 1.50

15486-15489 PB L 70343 Correspondence on textile aids. 1934. In German. 1.50

15490-15501 PB L 70343 Research in the field of "Igepons." By Platz, Rosenbach, and Vahlberg. 1933. In German. 1.50

15502-15510 PB L 70343 N,N higher aliphatic substituted taurines. By Vahlberg. 1932. In German. 1.50

15511 PB L 70343 "Igepon"-like derivatives of sulfanilic acid. By Vahlberg. 1933. In German. 1.50

15512-15513 PB L 70343 Preparation of lubricating "Igepon." By Daimler and Vahlberg. 1933. In German. 1.50

15514-15521 PB L 70343 Production of textile aids. By Daimler, Platz, and Zckelmann. 1933. In German. 1.50

15522-15523 PB L 70343 Bucking agents (substitute for "Biancal"). By Daimler and Vahlberg. 1933. In German. 1.50

15524-15527 PB L 70343 Syntheses with chlorinated higher ethers. By Daimler and Rosenbach. 1933. In German. 1.50

15528-15531 PB L 70343 Finishing resistant to washing. By Koch. 1933. In German. 1.50

15532-15535 PB L 70343 Powdery waterproofing and delustering agents. By Koch. 1933. In German. 1.50

15536-15538 PB L 70343 Waterproofing agents in emulsion form. By Daimler and Koch. 1933. In German. 1.50

15539-15543 PB L 70343 Products for use other than in the textile industry. By Daimler and Paquin. 1933. In German. 1.50

15544-15545 PB L 70343 Polyhydroxyethylation. n.d. In German. 1.50

15546-15549 PB L 70343 Preparation of aliphatic amines (of higher molecular weight) from fatty acids (of higher molecular weight) by means of hydrazoic acid. n.d. In German. 1.50

15550-15552 PB L 70343 Preparation of primary aliphatic amines (of higher molecular weight) from fatty acids (of higher molecular weight) or their amides by means of methyl urethanes. 1932. In German. 1.50

15553-15554 PB L 70343 Isopropylamine from acetone. n.d. In German. 1.50

15555-15557 PB L 70343 "Dismutation" of aliphatic aldehydes (with higher molecular weight) to form the corresponding esters and alcohols: Conversion of aldehydes of fatty acids (with higher molecular weight) into fatty acid esters and preparation of alcohols with long carbon chains. 1932. In German. 1.50

15558-15559 PB L 70343 Reactions with aliphatic alcohols of higher molecular weight. n.d. In German. 1.50

15560-15561 PB L 70343 Reaction products of rubber. n.d. In German. 1.50

15562-15565 PB L 70343 Reacting maleic acid with castor oil or 1,3-butyleneglycol. 1933. In German. 1.50

15566-15573 PB L 70343 Wetting agents for mercerization. 1932. In German. 1.50

15574-15575 PB L 70343 Utilization of chloroacetone. n.d. In German. 1.50

15576-15577 PB L 70343 Amines of the sugar series. n.d. In German. 1.50

15578-15580 PB L 70343 Rearrangement according to Fries in the presence of BF_3. n.d. In German. 1.50

15581-15586 PB L 70343 Textile auxiliary agents from polymers. By Voss and Starck. 1933. In German. 1.50

15587-15588 PB L 70343 Ethionic acid and carbyl sulfate. n.d. In German. 1.50

15589-15592 PB L 70343 — Taurines from ethionic acid salts in the presence of ammonia or amines. 1933. In German. 1.50

15593-15596 PB L 70343 — Nitriles and amines of fatty and resinic acids with high molecular weight. 1933. In German. 1.50

15597-15600 PB L 70343 — Preparation of methyltaurine from hydroxyethane sulfonate and methylamine in aqueous solution. 1933. In German. 1.50

15601-15603 PB L 70343 — Chloroalkylsulfonic acids and homologous taurines. 1933. In German. 1.50

15604-15608 PB L 70343 — Textile auxiliary agents based on butadiene. By Schmidt. 1933. In German. 1.50

15609-15610 PB L 70343 — Acylation of amino or hydroxy disulfonic acids. By Vahlberg. 1933. In German. 1.50

15611-15614 PB L 70343 — Amines of the sugar series and their derivatives. By Balle, Horst, and Vahlberg. 1933. In German. 1.50

15615-15617 PB L 70343 — Bases obtained through cleavage during amination of sugar. 1933. In German. 1.50

15618-15623 PB L 70343 — Hydroxyethylation of phenols and phenol resins. 1933. In German. 1.50

15624-15627 PB L 70343 — Fluorinated "Igepons." 1933. In German. 1.50

15628-15630 PB L 70343 — Imidoethers and amidines. 1933. In German. 1.50

15631-15632 PB L 70343 — Diamine bases. By Balle. 1934. In German. 1.50

15633-15635 PB L 70343 — Alkylphenols. By Balle. 1934. In German. 1.50

15636 PB L 70343 — Reactions with chloroacetone. By Balle. 1934. In German. 1.50

15637 PB L 70343 — Rearrangement of the carbon chain of fatty acids that have a higher molecular weight. By Balle. 1934. In German. 1.50

15638-15644 PB L 70343 — Amines of fatty acids. By Daimler. 1934. In German. 1.50

15645-15646 PB L 70343 — Imidoethers and amidines. By Daimler and Eckelmann. 1934. In German. 1.50

15647-15651 PB L 70343 — Amino carboxylic acids having a higher molecular weight. By Bücking, Platz, and Rosenbach. 1934. In German. 1.50

15652-15653 PB L 70343 — Preparation of polybutyl phenyl-acetic acid. By Platz and Rosenbach. 1934. In German. 1.50

15654-15656 PB L 70343 — Cleavage of ethylether-beta,beta'-disulfonic acid. By Schmidt. 1934. In German. 1.50

15657-15659 PB L 70343 — Fatty acids with built-in rings. By Schimmelschmidt. 1934. In German. 1.50

15660-15665 PB L 70343 — Preparation and use of aliphatic aminocarboxylic acids having a higher molecular weight, particularly of their alkylation products. By Platz and Bücking. 1935. In German. 1.50

15666-15674 PB L 70343 — Betaine derivatives. By Balle. 1935. In German. 1.50

15675-15677 PB L 70343 — Preparation and use of sulfobetaines. By Schmidt. 1935. In German. 1.50

15678-15687 PB L 70343 — Polybutylphenylacetic acid and compounds of similar constitution. By Platz and Rosenbach. 1935. In German. 1.50

15688-15690 PB L 70343 — Capillary active carboxylic acids which have a higher molecular weight and a branched chain. By Platz and Rosenbach. 1935. In German. 1.50

15691 PB L 70343 — Hygroscopicity of "Igepons." 1935. In German. 1.50

15692-15697 PB L 70343 — Hydrophobing of cellulose fibers. By Eckelmann and Rosenbach. 1935. In German. 1.50

15698-15701 PB L 70343 — Dyeing auxiliary agent of the "Dispergamin" type and allied products. By Paquin. 1935. In German. 1.50

15702-15723 PB L 70343 — Addition agents for soaps. By Daimler. 1935. In German. 2.50

15724-15770 PB L 70343 — Detergents. 1935-1936. In German. 5.00

15771-15781 PB L 70343 — Detergents based on alkylphenols of a higher molecular weight. By Balle. 1936. In German. 1.50

15782-15787 PB L 70343 — Hygroscopicity of "Igepons." 1936. In German. 1.50

15788-15827 PB L 70343 — Methods of white-washing experiments and their results. By Daimler. 1936. In German. 4.00

15828-15833 PB L 70343 — Detergents. 1936. In German. 1.50

15834-15845 PB L 70343 — Experiments for preparing condensation products from halogenation products of petroleum and other German mineral oils with the help of phenols. Subsequent hydroxethylation of the products to form detergents. 1936. In German. 1.50

15846-15851 PB L 70343 — Detergents free from fat, based on alkylphenol. By Balle. 1936. In German. 1.50

15852-15861 PB L 70343 — Transformations of alkylphenols and their polyglycol ethers. By Balle. 1936. In German. 1.50

15862-15871 PB L 70343 — Textile aids from Leuna "Middle Oil." By Platz and Bücking. 1936. In German. 1.50

15872-15879 PB L 70343 — Aliphatic sulfonium betaines having a higher molecular weight. By Platz. 1936. In German. 1.50

15880-15896 PB L 70343 — Hydrophobing of cellulose. By Eckelmann and Rosenbach. 1936. In German. 2.00

15897-15909 PB L 70343 — Hydroxyethylation products of fatty compounds. By Platz and Jans. 1936. In German. 1.50

15910-15921 PB L 70343 — Testing methods for fine-washing agents. By Daimler. 1936. In German. 1.50

15922-15928 PB L 70343 Foaming power of "Igepons" and sulfonated and carboxylated urethanes. By Daimler, Jans, and Rosenbach. 1936. In German. 1.50

15929-15938 PB L 70343 "Sulan." By Stötter. 1937. In German. 1.50

15939-15954 PB L 70343 Textile auxiliary agents from ureas having two capillary active groups. By Platz, Grom, and Bücking. 1937. In German. 2.00

15955-15962 PB L 70343 Alkyl phenol ether sulfonic acids. By Platz and Wagner. 1937. In German. 1.50

15963-15971 PB L 70343 Textile auxiliary agents based on glycerol diethers. By Platz and Grom. 1937. In German. 1.50

15972-15974 PB L 70343 Alkyl phenoxy acetic acids. By Schild. 1937. In German. 1.50

15975-15979 PB L 70343 Preparation of alkylated benzoic acids. By Wagner. 1937. In German. 1.50

15980-15981 PB L 70343 Determination of the endpoint in polyhydroxyethylation experiments. By Langbein I. 1937. In German. 1.50

15982-15984 PB L 70343 "White washing agent Hoe 153." By Horst. 1937. In German. 1.50

15985-15987 PB L 70343 Research in the field of hydrophobing. By Rosenbach. 1937. In German. 1.50

15988-15991 PB L 70343 Water softening agent prepared by the chloroacetic acid method. By Kissling and Schörnig. 1937. In German. 1.50

15992-15999 PB L 70343 The property of "Trilon A" and "Ma 416" to form complexes. By Platz. 1937. In German. 1.50

16000-16016 PB L 70343 "Igepals" and detergents of the Hoe 153 type. By Horst, Wagner, Langbein I, and Schild. 1938. In German. 2.00

16017-16033 PB L 70343 Mechanism of the reaction of hyurophobing. By Balle and Dittus. 1938. In German. 2.00

16034-16053 PB L 70343 Hydrophobing agent. By Jörg, Wagner, and Rosenbach. 1938. In German. 2.00

16054-16081 PB L 70343 Quick-acting wetting agents. By Platz, Grom and Sönke. 1938. In German. 3.00

16082-16087 PB L 70343 Imidazolines. By Platz and Wolf. 1938. In German. 1.50

16088-16098 PB L 70343 Synthetic neutral oils, waxes, and substitutes for tallosan. By Bücking and Platz. 1938. In German. 1.50

16099-16108 PB L 70343 Ethylene oxide condensation products. By Winnacker. 1938. In German. 1.50

16109-16123 PB L 70343 Characterizing fibrous materials by measuring the speed with which they absorb wetting liquids. By Papat. 1938. In German. 1.50

16124-16130 PB L 70343 Sulfochlorination of aliphatic hydrocarbons. By Balle and Weigerle. 1940. In German. 1.50

16131-16144 PB L 70343 Analytical examination of "Mepasin" sulfochlorides. By Graf. 1939. In German. 1.50

16145-16157 PB L 70343 Separation of aliphatic hydrocarbons from aliphatic sulfochlorides by means of liquid sulfur dioxide. By Graf. 1940. In German. 1.50

16158-16162 PB L 70343 Process for the preparation of esters from aliphatic sulfochlorides and alcohols. By Langbein and Wagner. 1939. In German. 1.50

16163-16172 PB L 70343 Aliphatic sulfamides. By Balle, Schild, Wagner, and Wangbein. 1940. In German. 1.50

16173-16179 PB L 70343 Conversion of aliphatic sulfochlorides by means of aliphatic hydroxy amines. By Wagner and Doerfelt. 1939. In German. 1.50

16180-16185 PB L 70343 Conversion of aliphatic sulfamides by means of aldehydes. By Wagner. 1940. In German. 1.50

16186-16189 PB L 70343 Mono alkylated ethylenediamines (Incomplete). By Graf. 1939. In German. 1.50
The last three pages of this report are reproduced on reel C 15, (PB 70344).

PB L 70343-S. ANORGANA G.M.B.H., GENDORF, UPPER BAVARIA. A collection of reports on organic chemicals. (FIAT Microfilm Reel C-14, Frames 15188-16189, abstract cards) 1932-1943. 155 p. Price: Microfilm-$4.00 - Photostat-$11.00
These are abstracts of the items on reel C-14 (PB 70343) described above. They were prepared by FIAT abstracters in Germany.

PB L 78662. CALVIN, M., and LEMMON, R. M. The decarbonylation of ethyl pyruvate. Apr 1947. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
$CH_3C^{14}OCOOEt$ has been prepared and then thermally decomposed between 110 and 130° C. The evolved CO which was obtained in 90% yield had no detectable activity and was evidently evolved from the carboxyl group of the α-keto ester. This paper is based on work under contract No. W-7405-Eng-48 with the Atomic Energy Commission in connection with the Radiation Laboratory, and Department of Chemistry, University of California.

PB L 74413. DEUTSCHE GOLD UND SILBERSCHEIDEANSTALT, FRANKFURT AM MAIN, GERMANY. A collection of file notes and technical reports. (FIAT Microfilm Reel G-294, Frames 2090-3004) 1933-1945. 915 f. Price: Microfilm-$6.00 - Enlargement Print-$91.50
This FIAT microfilm reel contains 115 Degussa reports on a variety of subjects. Individual items, as listed below, will be available as enlargement prints only. Please give PB and frame numbers when ordering. These reports are in German.

Frames	Title	Price
2090-2091 PB L 74413	Note (on carbon black production from natural gas). No signature. 1942. In German.	$1.50
2092-2094 PB L 74413	File notes (on planned rubber production in occupied Ukraine). By Baerwind. 1942. In German.	1.50
2095 PB L 74413	Note on (planned) production of carbon black in Hungary. No signature. 1942. In German.	1.50
2096-2097 PB L 74413	Note concerning "Russherstellungsgesellschaft Ost." By Baerwind. 1941. In German.	1.50
2098-2100 PB L 74413	Conference on carbon black production in Galicia. By Baerwind. 1941. In German.	1.50

2101-2102 PB L 74413 — Conference on "Russherstellungsgesellschaft Ost." By Baerwind. 1941. In German. 1.50

2103-2109 PB L 74413 — Conferences concerning carbon black production in Galicia. By Baerwind and Freudenberg. 1941. In German. 1.50

2110-2112 PB L 74413 — Testing of two Galician carbon black samples for suitability in rubber. By Stapelfeldt. 1941. In German. 1.50

2113-2114 PB L 74413 — Confidential note (concerning "Russherstellungsgesellschaft Ost"). By Baerwind. 1941. In German. 1.50

2115-2118 PB L 74413 — Conference at the Reich Office for Economic Development on problems in the carbon black field. By Baerwind. 1941. In German. 1.50

2119-2120 PB L 74413 — Conference concerning "Russherstellungs-Gesellschaft m.b.H. Ost." By Baerwind. 1941. In German. 1.50

2121-2122 PB L 74413 — File note concerning carbon black interests in Russia. By Baerwind. 1941. In German. 1.50

2123-2126 PB L 74413 — Russherstellungs-G.m.b.H. Ost. By Bojunga and Federlin. 1941. In German. 1.50

2127-2129 PB L 74413 — File notes on carbon black and synthetic rubber interests in Russia. By Baerwind. 1941. In German. 1.50

2130-2131 PB L 74413 — Tests of Ukrainian carbon black for use in rubber. By Stapelfeldt. 1941. In German. 1.50

2132-2149 PB L 74413 — Trip to the East-Galician oil area for inspection of two carbon black plants. By Pross. 1941. In German. 2.00

2150-2152 PB L 74413 — Meeting of the working committee of Deutsche Gasrusswerke, in Berlin, 8/28/1941. By Baerwind. 1941. In German. 1.50

2153-2156 PB L 74413 — File notes concerning carbon black factory No. 3 in Ugersthal near Kalusz (Galicia). By Fischer. 1941. In German. 1.50

2157-2158 PB L 74413 — Carbon black for dyeing viscose. By Oelmann. 1942. In German. 1.50

2159 PB L 74413 — "Philburgin" calculation. No signature. 1941. In German. 1.50

2160-2175 PB L 74413 — Experiments on roasting carbon black for use in electric cells. By Stapelfeldt. 1941. In German. 2.00

2176-2177 PB L 74413 — Comparative tests of carbon blacks. By Stapelfeldt. 1941. In German. 1.50

2178-2180 PB L 74413 — Active carbon and acetylene carbon black for electric cells depolarized by air. By Schulenburg. 1941. In German. 1.50

2181-2208 PB L 74413 — Tests of various carbon blacks for their suitability in electric cells. By Stapelfeldt. 1940. In German. 3.00

2209-2210 PB L 74413 — Test of the carbon black produced in Dortmund from acetylene, for its suitability in rubber. By Stapelfeldt. 1940. In German. 1.50

2211-2218 PB L 74413 — Minutes of the third conference of carbon black technicians, April 10, 1940. Incomplete, unsigned. 1940. In German. 1.50

The following 6 items (by Kohl) are based on visits to U.S. plants.

2219 PB L 74413 — Method for producing opaque glazes. By Kohl. 1937. In German. 1.50

2220-2223 PB L 74413 — Acid fast fluxes for blue and white glazes. By Kohl. 1937. In German. 1.50

2224-2227 PB L 74413 — The production of glazes, particularly the transparent red enamels 8654 and 9365. By Kohl. 1937. In German. 1.50

2228 PB L 74413 — Production of "Mosaic Gold." By Kohl. 1937. In German. 1.50

2229 PB L 74413 — Batches of American enamel frits. By Kohl. 1937. In German. 1.50

2230 PB L 74413 — Production of cadmium carbonate. By Kohl. 1937. In German. 1.50

2231-2236 PB L 74413 — A new black pigment (for enamels). By Diehl. 1937. In German. 1.50

2237-2240 PB L 74413 — Pigments based on cerium oxide. By Diehl. 1937. In German. 1.50

2241-2242 PB L 74413 — Experiments for prevention of the bleeding of black pigment 24033. By Diehl. 1937. In German. 1.50

2243-2248 PB L 74413 — Production of pigments from lead oxide and kaoline. By Pohl. 1937. In German. 1.50

2249-2253 PB L 74413 — Pigments based on chromic and cupric oxides. By Diehl. 1939. In German. 1.50

2254-2263 PB L 74413 — Demonstration of porous concretes. By Pohl. 1938. In German. 1.50

2264-2268 PB L 74413 — Production of porous gypsum without hydrogen peroxide. By Pohl. 1938. In German. 1.50

2269 PB L 74413 — Stabilization of hydrogen peroxide with saponine. Signature illegible. 1940. In German. 1.50

2270-2283 PB L 74413 — Experiments at the cork brick factory C. and L. Mahla. By Schneider. 1940. In German. 1.50

2284-2286 PB L 74413 — Utilization of light ashes for producing porous concrete. By Raum. 1940. In German. 1.50

2287 PB L 74413 — Special catalyst (for dissociating hydrogen peroxide). By Schneider. 1940. In German. 1.50

2288-2300 PB L 74413 — New methods for producing porous concretes. By Schneider. 1940. In German. 1.50

2301-2304L PB L 74413 — Forming of porous concrete. By Schneider. 1939. In German. 1.50

2305-2311 PB L 74413 — Tests of blocks of porous concrete. By Schneider. 1939. In German. 1.50

2312-2325 PB L 74413 — Production of porous concrete with hydrogen peroxide as only aerating agent. By Schelling. 1943. In German. 1.50

2326-2334 PB L 74413 — Aerating of "Degussit" (pure aluminum oxide). By Schneider. 1942. In German. 1.50

2335-2346 PB L 74413 — Hardening porous concrete with steam. By Schneider. 1941. In German. 1.50

2347-2350 PB L 74413 — Report on tests of special cement. By Schneider. 1941. In German. 1.50

2351-2352 PB L 74413 — Experiences with steam hardening of porous concrete. By Schneider. 1941. In German. 1.50

2353-2359 PB L 74413 — Rapid production of porous synthetic resins. By Schneider. 1941. In German. 1.50

2360-2367 PB L 74413 — Porous concrete. Reprint from the journal "Bauindustrie." By Schneider. 1940. In German. 1.50

2368-2374 PB L 74413 — Official regulations concerning porous concrete. The Minister for Labor, signed: Schmidt. 1940. In German. 1.50

2375-2394 PB L 74413 — Directions for producing porous concrete. No signature. n.d. In German. 2.00

2395-2402 PB L 74413 — Results of tests with porous concrete. State office for testing materials. 1933. In German. 1.50

2403-2412 PB L 74413 — Advertising matter for porous concrete. n.d. In German. 1.50

2413-2550 PB L 74413 — Index of Degussa materials. n.d. In German. 14.00

2551 PB L 74413 — This frame is missing.

2552-2554 PB L 74413 — Testing of protective coatings on iron plates for resistance to acids (results negative). By Medweth. n.d. In German. 1.50

2555-2558 PB L 74413 — Berl's method for obtaining hydrogen peroxide on active carbon cathodes. By Nees. 1944. In German. 1.50

2559-2565 PB L 74413 — Production of iron powder. By Andrich. 1945. In German. 1.50

2566-2578 PB L 74413 — "Lamepon" experiments (a detergent). By Pistor. 1945. In German. 1.50

2579-2586 PB L 74413 — Production of chlorite. By Wagner. 1945. In German. 1.50

2587-2591 PB L 74413 — Apparatus for producing "Lamepon". By Medweth. 1945. In German. 1.50

2592-2598C PB L 74413 — Economizing the use of lead and antimony. By Medweth. 1944. In German. 1.50

2599-2608 PB L 74413 — Production of highly concentrated hydrogen peroxide. Signature illegible. 1944. In German. 1.50

2609-2616 PB L 74413 — Distillation of persulfuric acid. By Nees. 1944. In German. 1.50

2617-2620 PB L 74413 — Draft of directions for the purification of sulfuric acid. No signature. 1943. In German. 1.50

2621-2633 PB L 74413 — Hydrolysis of persulfuric acid. By Nees. 1943. In German. 1.50

2634-2659A PB L 74413 — Distillation of persulfuric acid. By Nees. 1943. In German. 3.00

2660-2661 PB L 74413 — Index of above reports (frames 2551-2661). n.d. In German. 1.50

2662 PB L 74413 — Explanatory note by FIAT screeners Hass and Stevens. n.d. In German. 1.50

2663-2682 PB L 74413 — The scale-forming rate of nickel, nickel-chromium, and "Permatherm." By Gödecke. 1935. In German. 1.50

2683-2695 PB L 74413 — New nonscale forming resistance alloy from chromium-nickel. By Gödecke. 1935. In German. 1.50

2696-2698 PB L 74413 — Gas-tight installation of platinum-rhenium elements in armatures. By Gödecke. 1935. In German. 1.50

2699-2708 PB L 74413 — The alloy gold (70) platinum (30), for nozzles. By Holzmann. 1935. In German. 1.50

2709-2712 PB L 74413 — Tantalum nozzles. By Holzmann. 1935. In German. 1.50

2713-2715 PB L 74413 — Welding of silver and nickel. 1936. In German. 1.50

2716-2728 PB L 74413 — Casting of chromium-nickel and chromium-iron without cavities. By Gödecke. 1936. In German. 1.50

2729-2737 PB L 74413 — The scale forming rate of nickel-chromium and iron-chromium alloys containing thorium. By Gödecke. 1936. In German. 1.50

2738 PB L 74413 — This frame is missing.

2739-2745 PB L 74413 — Dental alloy. By Gödecke. 1936. In German. 1.50

2746-2768 PB L 74413 — Investigation of "Heraeus" patents for heat-resistant alloys. By Gödecke. 1936. In German. 2.50

2769-2779 PB L 74413 — Bending tests of cannulae. By Fröhlich. 1936. In German. 1.50

2780-2793 PB L 74413 — Working methods. By Fröhlich and Gödecke. 1936. In German. 1.50

2794-2800A PB L 74413 — Nickel-iron alloys and nickel alloys, free of gas. By Gödecke. 1936. In German. 1.50

2801-2814A PB L 74413 — Behavior of platinum alloys at high temperatures. By Fröhlich. 1937. In German. 1.50

2815-2816 PB L 74413 — The effect of alkali melts on silver-containing nickel. By Fröhlich. 1937. In German. 1.50

2817-2820 PB L 74413 — Tensile tests of silver wires with varying content of nickel. By d'Ottilie. 1937. In German. 1.50

2821-2823 PB L 74413 — A hypothetical platinum alloy resistant to phosphorus. By Fröhlich. 1937. In German. 1.50

2824-2828 PB L 74413 — Checking the growth of silver grains by addition of nickel. By Fröhlich. 1937. In German. 1.50

2829-2836 PB L 74413 — Investigation of the "Kanthal" alloys from Sweden. By Fröhlich. 1937. In German. 1.50

2837-2840 PB L 74413 — Investigation of silver-magnesium-tin alloys. By d'Ottilie. 1938. In German. 1.50

2841-2842 PB L 74413 — Investigation of silver-antimony-silicium alloys. By d'Ottilie. 1938. In German. 1.50

2843-2845 PB L 74413 — Behavior of platinum alloys at high temperatures. By Fröhlich. 1938. In German. 1.50

2846-2852 PB L 74413 — Investigation of silver-thorium-alloys. By d'Ottilie. 1938. In German. 1.50

2853-2855 PB L 74413 — Investigation of silver-tin-silicium alloys. By d'Ottilie. 1938. In German. 1.50

2856-2858 PB L 74413 — Investigation of silver-copper-silicium alloys. By d'Ottilie. 1938. In German. 1.50

2859-2861 PB L 74413 — Silver alloys with 5% palladium and varying contents of magnesium. By d'Ottilie. 1938. In German. 1.50

2862-2866 PB L 74413 — The growth of pure silver grains compared with silver containing small alloy admixtures. By Perschbacher. 1938. In German. 1.50

2867-2870 PB L 74413 — Spinning nozzles. By Holzmann. 1939. In German. 1.50

2871-2872 PB L 74413 — Investigation of silver-thorium-magnesium alloys. By d'Ottilie. 1939. In German. 1.50

2873-2875 PB L 74413 — Hard chromium plating of boxing tools and bearings. By Holzmann. 1939. In German. 1.50

2876-2888 PB L 74413 — Preliminary results of the search for new metal catalysts for ammonia oxidation. By Holzmann. 1939. In German. 1.50

2889-2891 PB L 74413 — Investigation of silver-copper-thorium alloys. By d'Ottilie. 1939. In German. 1.50

2892-2900 PB L 74413 — Tantalum nozzles. By Holzmann. 1938. In German. 1.50

2901-2904 PB L 74413 — Silver-thorium-thallium alloys. By d'Ottilie. 1938. In German. 1.50

2905-2908 PB L 74413 — Silver-tin-aluminum alloys. By d'Ottilie. 1938. In German. 1.50

2909-2913 PB L 74413 — Creeping strength of pure silver and silver containing nickel. By Fröhlich. 1938. In German. 1.50

2914-2918 PB L 74413 — Diffusion of copper and platinum. By Zahn. 1941. In German. 1.50

2919-2921 PB L 74413 — Materials for tooth pins. By Fröhlich and Barthel. 1941. In German. 1.50

2922-2926 PB L 74413 — Corrosion of platinum-silver wires. By Fröhlich. 1940. Incomplete. In German. 1.50

2927-2937 PB L 74413 — Comparison of bleaching with chlorite and with chlorate. By Vieweg. 1944. In German. 1.50

2938-2970 PB L 74413 — Bleaching experiments with sodium chlorite. By Baier. 1944. In German. 3.50

2971-2990 PB L 74413 — Porous concrete. By Vieweg. 1944. In German. 2.00

2991-2997 PB L 74413 — "TQ" resins. (Pentaerythrite-acroleine resins.) By Wagner. 1944. In German. 1.50

2998-3004 PB L 74413 — Investigation of protein-fatty acid condensation products. By Baier. 1945. In German. 1.50

PB L 74329. DEUTSCHE GOLD UND SILBERSCHEIDEANSTALT, FRANKFURT AM MAIN, GERMANY. Reports in the field of chemical technology. (FIAT Microfilm Reel G-288, Frames 1164-2089). 1936-1943. 926 f. Price: Microfilm-$6.00 - Enlargement print-$93.00

This FIAT microfilm reel consists of 110 reports on various chemical processes, particularly for carbon black and for hydrogen peroxide, from Germany and other countries. Individual items, listed below, will be available as enlargement prints only. Please include PB and frame numbers when ordering. These items are in German, some partially in English.

Frames	Title	Price
1164-1168 PB L 74329	Report on U. S. #25: Automatic control at the hydrogen peroxide plant of H & H. By Mees, 1939.	$1.50
1169-1176 PB L 74329	Report on U. S. #24: H & H storage tanks for hydrogen peroxide; and general remarks. By Mees, 1939.	1.50
1177-1185 PB L 74329	Report on U. S. #23: Installations at H & H for purification of hydrogen peroxide. By Mees, 1939.	1.50
1186-1189 PB L 74329	Report on U. S. #22: The use of tantalum in electrolysis and distillation of persulfuric acid at H & H. By Mees, 1939.	1.50
1190-1196 PB L 74329	Report on U. S. #21: H & H's distillation plant for persulfuric acid. By Mees, 1939.	1.50
1197-1202 PB L 74329	Report on U. S. #20: New cells for persulfuric acid. By Mees, 1939.	1.50
1203-1210 PB L 74329	U. S. Report #19: Electrolysis of persulfuric acid. By Mees, 1939.	1.50
1211-1216 PB L 74329	U. S. Report #18: Aluminum and hydrogen peroxide. By Mees, 1939.	1.50
1217-1234 PB L 74329	U. S. Report #17: General remarks on stabilization; discussion of the entire peroxide field with Dr. Reichert. By Mees, 1939.	2.00
	(Reports #16 and #15 are not here)	
1235-1242 PB L 74329	U. S. Report #14: Thermal synthesis of hydrogen peroxide from the elements. By Mees, 1939.	1.50
	(Reports #12 to #2 are not here)	
1243-1257 PB L 74329	U.S. Report #1: Cyanide plant. By Mees, 1939.	1.50
1258-1266 PB L 74329	Report on the slops-cyan-factory in Stalinskaya (Russia). By E. Walther, 1942.	1.50
1267-1274 PB L 74329	Inspection of the potash works Kolin (cyan production). By Baier, 1941.	1.50
1275-1281 PB L 74329	Tests of the crude potash from vinasse gasification. By Baier, 1938.	1.50
1282-1284 PB L 74329	Technical directions for producing 2-amino-pyridine and 2,6-diamino-pyridine. By Bauer, 1940.	1.50

Miscellaneous Chemicals (contd)

1285-1286 PB L 74329 Technical directions for grinding sodium amide, and producing sodium amide suspensions. By Bauer, 1940. 1.50

1287-1291 PB L 74329 Processing of the residue from amino-pyridine production for 2,6-diamino pyridine. By Bronig, 1942. 1.50

1292-1298 PB L 74329 2-Amino-pyridine. By Schulenburg, 1937. 1.50

1299-1305 PB L 74329 2,6-Diamino-pyridine. By Schulenburg, 1937. 1.50

1306-1310 PB L 74329 Can "Neotropin" and "Uroselectan" be synthesized without using 2-amino- 2,6-diamino-pyridine? By Schulenburg, 1938. 1.50

1311-1317 PB L 74329 Carbonization of anthracene oil. By Haas, 1942. 1.50

1318-1321 PB L 74329 Ozone carbon black installation. By Wagner, 1942. 1.50

1322-1323 PB L 74329 Carbon black experiments. By Haas, 1942. 1.50

1324-1327 PB L 74329 Anthracene oil experiments. By Janovich, 1942. 1.50

1328-1338 PB L 74329 Carbon black experiments with illuminating gas. By Haas, 1942. 1.50

1339-1352 PB L 74329 Anthracene experiments. By Janovich, 1942. 1.50

1353-1356 PB L 74329 A substitute for "Peerless". By Koffler, 1942. 1.50

1357-1360 PB L 74329 The Dusek process (for carbon black). By Baerwind, 1942. 1.50

1361-1364 PB L 74329 Explosion carbon black. By Dittrich, 1942. 1.50

1365-1368 PB L 74329 Carbon black experiments. By Wagner, 1942. 1.50

1369-1374 PB L 74329 Inspection of the carbon black plant of the Rütgers Werke at Moravska Ostrava. By Flosskamp, 1943. 1.50

1375-1391 PB L 74329 Gas black experiments. By Haas, 1943. 2.00

1392-1396 PB L 74329 The effect of lowering the carbon content of "CK3" on its properties. By Oelmann, 1943. 1.50

1397-1398 PB L 74329 File notes concerning government control of carbon black production. 1943. 1.50

1399-1406 PB L 74329 Gas black experiments. By Haas, 1943. 1.50

1407-1411 PB L 74329 Calculation of the "hydrogen method." By Wagner, 1943. 1.50

1412-1416 PB L 74329 Gas black experiments. By Haas, 1943. 1.50

1417-1420 PB L 74329 Hydrogen as supporting gas. By Hupe, 1943. 1.50

1421-1424 PB L 74329 The hydrogen method. By Wagner, 1943. 1.50

1425-1442 PB L 74329 Gas black experiments. By Haas, 1943. 2.00

1443-1445 PB L 74329 Experiences in the operation of the new melting plant. By Wagner, 1943. 1.50

1446-1454 PB L 74329 Use of the selenium cell. By Janovich, 1943. 1.50

1455-1473 PB L 74329 The effect of various carbon blacks in Buna mixtures. By Stapelfeldt, 1943. 2.00

1474-1482 PB L 74329 Testing of various carbon blacks for buna and rubber. By Lann and Stapelfeldt, 1939-1943. 1.50

1483-1485 PB L 74329 Estimated construction cost of a carbon black plant. By Nagel, 1938. 1.50

1486-1488 PB L 74329 Comparison of the various carbon black methods. Volkel, 1937. 1.50

1489-1491 PB L 74329 Inspection of the carbon black factory in Lagiewniki, 1938. 1.50

1492-1550 PB L 74329 The "Huco" method (for producing chlorinated rubber). By Michaelis, Zander and Nagel, 1936. 6.00

1551-1560 PB L 74329 Emulsion paints based on chlorinated rubber. By Zander, 1936-1937. 1.50

1561-1563 PB L 74329 Carbonization of French anthracene oil. By Haas, 1943. 1.50

1564-1576 PB L 74329 Contract between Degussa and Italian firms. 1941. 1.50

1577-1596 PB L 74329 "Carbonalpha" tests, and layout of the "Carbonalpha" factories in France. 1938-1942. (82 frames) 6.50

1597-1616 PB L 74329 Gas black experiments. By Wagner, 1940. 2.00

1617-1633 PB L 74329 Experiments for producing carbon blacks with improved flowing properties. By Wagner and Oelmann, 1940. 2.00

1634-1651 PB L 74329 Gas black experiments. By Wagner, 1940. 2.00

1652-1654 PB L 74329 Testing of electro filter dust for use with rubber. By Stapelfeldt, 1940. 1.50

1655-1660 PB L 74329 Testing of carbon blacks for use in electrical cells. By Stapelfeldt, 1940. 1.50

1661-1671 PB L 74329 Gas black experiments. By Wagner, 1940. 1.50

1672-1673 PB L 74329 Carbon blacks with high content of volatile components. By Stopelfeldt, 1940. 1.50

1674-1680 PB L 74329 Carbon black tests. By Stapelfeldt, 1940. 1.50

1681-1684 PB L 74329 Report on the inspection of the carbon black plant Schulze, Ihringhausen. By Gros, 1940. 1.50

1685-1692 PB L 74329 Experiments on fuel synthesis according to Riedel-Polenska. By Woltersdorf, 1940. 1.50

1693-1699 PB L 74329 Comparative experiments on the carbonization of benzene, pyridine, naphthalene and quinoline. By Wagner, 1940. 1.50

1700-1703 PB L 74329 Comparison of carbon black production in Hohenlinden, Moravska-Ostrava, I. G. Ludwigshafen, and Degussa. By Hupe, 1940. 1.50

1704-1750 PB L 74329 Gas black experiments in Kalscheuren. By Wagner, 1940. 5.00

1751-1782 PB L 74329 Carbon content and quality of carbon blacks. By Stapelfeldt, 1940. 3.50

1783-1798 PB L 74329 — Carbon black experiments. By Wagner, 1941. In German. 2.00

1799-1803 PB L 74329 — Improvement of carbon black by roasting. By Stapelfeldt, 1941. In German. 1.50

1804-1827 PB L 74329 — Gas black experiments in Kalscheuren. By Wagner, 1941. In German. 2.50

1828-1833 PB L 74329 — Oxygen experiments. By Wagner and Janovich, 1941. In German. 1.50

1834-1835 PB L 74329 — Naphthalene waste utilization. By Oelmann, 1941. In German. 1.50

1836-1838 PB L 74329 — Mixing carbon black to cement. By Hubold, 1941. In German. 1.50

1839-1854 PB L 74329 — Carbon blacks, their production and uses. By Stapelfeldt, 1941. In German. 2.00

1855-1864 PB L 74329 — Experiments for producing high-quality carbon blacks for printing inks. By Oelmann, 1941. In German. 1.50

1865-1866 PB L 74329 — Classification of carbon blacks. By Oelmann, 1941. In German. 1.50

1867-1869 PB L 74329 — Carbon black production, by the firm Nigrocarbon (Hungary). By Bosenbach, Oelmann, 1941. In German. 1.50

1870-1871 PB L 74329 — Testing of the carbon blacks from oxygen experiments for use with rubber. By Stapelfeldt, 1941. In German. 1.50

1872-1875 PB L 74329 — Visit at Julius Rütgers, Moravski-Ostrava. By Bojunga, 1941. In German. 1.50

1876 PB L 74329 — Note on experiments concerning addition of oxygen to the supporting gas. By Wagner and Ritter, 1941. In German. 1.50

1877-1890 PB L 74329 — Carbon black experiments with a supporting gas consisting of illuminating gas and small amounts of air. By Haas, 1941. In German. 1.50

1891 PB L 74329 — Untitled note with statistical data. By Hupe, 1941. In German. 1.50

1892-1894 PB L 74329 — Method for improving carbon blacks. By Koffler, 1941. In German. 1.50

1895-1898 PB L 74329 — Testing for use with rubber carbon blacks from benzene, pyridine, naphthalene, and quinoline. By Oelmann, 1941. In German. 1.50

1899-1900 PB L 74329 — Control of the temperature in surface evaporation at a carbon black plant. By Wagner, 1941. In German. 1.50

1901-1904 PB L 74329 — Test of the Kalschewien illuminating gas. By Ritter, 1941. In German. 1.50

1905-1915 PB L 74329 — Gas black experiments with the surface evaporator. By Wagner, 1941. In German. 1.50

1916-1921 PB L 74329 — The size of carbon black particles. By Stapelfeldt, 1941. In German. 1.50

1922-1923 PB L 74329 — Carbonization of fuel oil. By Haas, 1943. In German. 1.50

1924-1928 PB L 74329 — Carbonization of anthracene residue. By Haas, 1943. In German. 1.50

1929-1938 PB L 74329 — Gas black experiments with new burners. By Haas, 1943. In German. 1.50

1939-1940 PB L 74329 — Suitability of various carbon blacks for galvanic purposes. By Weiner, 1943. In German. 1.50

1941-1948 PB L 74329 — Minutes of meeting of carbon black technicians. By Wagner, 1943. In German. 1.50

1949-1972 PB L 74329 — Translation of carbonalpha reports on research on carbon monoxide reactions, calculation of a furnace, tests, etc. By Barth, 1942-1943. In German. 2.50

1973-1974 PB L 74329 — Note for Dr. Baerwind (on test results). By Oelmann, 1943. In German. 1.50

1975-1979 PB L 74329 — Dissociation of carbon monoxide. By Barth, 1943. In German. 1.50

1980-1981 PB L 74329 — Tests for rubber of carbon blacks made from carbon monoxide. By Laun, 1942. In German. 1.50

1982-1991 PB L 74329 — Petroleum experiments. By Janovich, 1942. In German. 1.50

1992-2006 PB L 74329 — Esthonian scale oil. By Haas, 1942. In German. 1.50

2007-2009 PB L 74329 — Carbonization of I. G. materials. By Janovich, 1942. In German. 1.50

2010-2013 PB L 74329 — Tests of carbon black samples for Buna. 1943. In German. 1.50

2014-2020 PB L 74329 — Gas black and lamp black in the U.S.S.R. By Sheller and Haas, 1943. In German. 1.50

2021-2029 PB L 74329 — Gas black plant in Apsheronskaya (Caucasus). By Haas, 1943. In German. 1.50

2030 PB L 74329 — Testing of three samples of Russian carbon black. By Ickler, 1943. In German. 1.50

2031 PB L 74329 — Note concerning Carbona G.M.B.H. Katowice. By Achterath, 1942. In German. 1.50

2032-2069 PB L 74329 — Lamp black factory in Armamir (Caucasus). In German. 4.00

2070-2072 PB L 74329 — Inspection of Carbona G.M.B.H. in Katowice, By Bojunga, 1942. In German. 1.50

2073-2076 PB L 74329 — Report on trip to Galicia. By Dittrich, 1942. In German. 1.50

2077-2082 PB L 74329 — Carbon black factories in the Caucasus. By Haas, 1942. In German. 1.50

2083-20858 PB L 74329 — Report on a trip to the Ukraine. By Miller, and others, 1942. In German. 1.50

2086-2087 PB L 74329 — File note concerning the Karpathen-Öl-A.G. By Baerwind, 1942. In German. 1.50

2088-2089 PB L 74329 — Notes on talks concerning carbon black problems. By Baerwind, 1942. In German. 1.50

PB L 73331. DEUTSCHE GOLD UND SILBERSCHEIDEANSTALT, KONSTANZ, GERMANY. A collection of laboratory reports of the Hisg-Verein, Frankfurt. (FIAT Microfilm Reel M 30, Frames 1-890) 1933-1934. 890 f. Price: Microfilm-$6.00 - Enlargement print-$89.00

Miscellaneous Chemicals (contd)

The 89 reports reproduced on this FIAT microfilm reel deal with organic chemicals. Individual items are listed below and will be available as enlargement prints only. Please include PB and frame numbers when ordering particular reports from this reel. In German.

Frames	Title	Price
1-59 PB L 73331	Catchword register of the documents contained on this reel. In German.	$6.00
60-68 PB L 73331	Production of water-soluble paraformaldehyde. By Kemmer, 1933. In German.	1.50
69-74 PB L 73331	Use of propionic ethyl ester for extraction purposes. By Grunert, 1933. In German.	1.50
75-79 PB L 73331	Reducing the viscosity of washed film waste. By Werner and Nagel, 1933. In German.	1.50
80-84 PB L 73331	Processing unwashed film waste. By Nagel, 1933. In German.	1.50
85-91A PB L 73331	Tests for the preparation of formaldehyde free from formic acid. By Wiesler, 1933. In German.	1.50
92-98 PB L 73331	The formation of methylene chloride from methanol. By Wiesler, 1933. In German.	1.50
99-102 PB L 73331	Processing of "Frankfurter Kalksäure." By Grunert, 1933. In German.	1.50
103-106 PB L 73331	Purification of a technical propionic acid from the Mombach acetic acid plant. By Werner, 1933. In German.	1.50
107-110 PB L 73331	Propionic anhydride from acetic anhydride and purified propionic acid. By Werner, 1933. In German.	1.50
111-115 PB L 73331	Cost outlay for the production of cellulose tripropionate. By Werner, 1933. In German.	1.50
116-121 PB L 73331	Purification of a technical butyric acid from the Mombach acetic acid plant. By Werner, 1933. In German.	1.50
122-140 PB L 73331	Combination of resins with cellulose esters. By Nagel, 1933. In German.	1.50
141-147 PB L 73331	Tests for the deacidification of acetaldehyde. By K. Wiesler, 1933. In German.	1.50
148-154 PB L 73331	Cost outlay for propionic anhydride and propionyl cellulose in the Mombach pilot plant. By Werner, 1933. In German.	1.50
155-156 PB L 73331	Acetone cyanohydrin. By Schulz, 1933. In German.	1.50
157-164 PB L 73331	Can the ketonization catalyst made at LaChambre be compared with that of the Frankfurt laboratory? By Miller, 1933.	1.50
165-169 PB L 73331	Self-costs of tripropionyl cellulose in a large-capacity apparatus. By Werner, 1933.	1.50
170-173 PB L 73331	Water-soluble paraformaldehyde. 1933. In German.	1.50
174-177 PB L 73331	Preparation of pure acetone cyanohydrin. By Schulz, 1933. In German.	1.50
178-184 PB L 73331	Installing and operating costs of a plant for the concentration of 25% aqueous propionic acid. By Grunert, 1933. In German.	1.50
185-190 PB L 73331	Fatty anhydrides of higher molecular weight. By Werner, 1933. In German.	1.50
191-198 PB L 73331	Ketonization of acetylene as well as of mixtures of acetaldehyde and acetylene. By Werner, 1933. In German.	1.50
199-209 PB L 73331	Extraction of fermentation acetic acid. By Grunert, 1933. In German.	1.50
210-212 PB L 73331	Production of pyrocyanine and its intermediate products. By Schultes, 1933. In German.	1.50
213-221 PB L 73331	Acetylene ketonization. By Miller, 1933. In German.	1.50
222-227 PB L 73331	Increase of the throughput of acetylene in the acetylene ketonization. By Werner, 1933. In German.	1.50
228-229 PB L 73331	Lowering the viscosity of film waste. By Werner, 1933. In German.	1.50
230-233 PB L 73331	The use of acetic anhydride in the separation of water from ammonium acetate or acetamide. By Wiesler, 1933. In German.	1.50
234 PB L 73331	Improving the odor of acetic acid for human consumption. By Kemmer, 1933. In German.	1.50
235-238 PB L 73331	Same title as 234. By Kemmer, 1933. In German.	1.50
239-242 PB L 73331	Use of acetic anhydride in the preparation of high-boiling esters. By Wiesler, 1933. In German.	1.50
243-248 PB L 73331	Comparison of the last runnings of crude acetic acid of different origin. By Kemmer, 1934. In German.	1.50
249-254 PB L 73331	Separation of water from ammonium palmitate in the presence of acetic anhydride. By Wiesler, 1934. In German.	1.50
255-256 PB L 73331	Supplement 1. Quantitative determination of methanol and formaldehyde by the bichromate method. - Supplement 2. Quantitative determination of methylal. In German.	1.50
257-272 PB L 73331	The effect of a very high methanol ballast in the production of formaldehyde. By Wiesler, 1934.	2.00
273-284 PB L 73331	Iron oxide as a catalyst for alcohol ketonization. By Querfurt, 1934. In German.	1.50
285-288 PB L 73331	Production of sodium acetate for fire proofing purposes. By Querfurth, 1934. In German.	1.50
289-291 PB L 73331	Production of acetone cyanohydrin. By Schulz, 1934. In German.	1.50
292-304 PB L 73331	Wet films of cellulose triacetate. By Nagel, 1934. In German.	1.50
305-308 PB L 73331	Preparation of paraformaldehyde products according to the	

British patent specification 308256. By Schmoche, 1934. In German. 1.50

309-319 PB L 73331 — Preparation of solid, easily soluble formaldehyde. By Wiesler and Schmoche, 1934. In German. 1.50

320-321 PB L 73331 — Guaiacol. By Schulz, 1934. In German. 1.50

322-335 PB L 73331 — Use of resins, plasticizers, and oils in chlorinated rubber lacquers. By W. Zander, 1934. In German. 1.50

336-342 PB L 73331 — Etherification of pentaerythritol with methyl sulfate. By Schulz, 1934. In German. 1.50

343-344 PB L 73331 — Recovery and determination of organic waste products in the exhaust gases of the formaldehyde plant. By Kemmer and Schultes, 1934. In German. 1.50

345-356 PB L 73331 — Tests for the conversion of naphthenic acid to products of use. By Wiesler, 1934. In German. 1.50

357-371 PB L 73331 — Experiments for determining the solubility of pure AE salt mixtures prepared in the laboratory in abs. alcohol with or without addition. By Schmoche, 1934. In German. 1.50

372-376 PB L 73331 — Examination of the extraction plant at Schleiden. By Grunert, 1934. In German. 1.50

377-379 PB L 73331 — Determination of the boiling and the freezing point of a 82% potassium-sodium acetate solution with varying admixtures of abs. alcohol. By Schmoche, 1934. In German. 1.50

380-388 PB L 73331 — Determination of the dissolved salts and their proportion in solutions of potassium-sodium acetate mixtures in abs. alcohol (salt mixtures for the dehydration of alcohol). By Schmoche, 1934. In German. 1.50

389-397 PB L 73331 — Wet film from triacetyl cellulose. By Werner and Nagel, 1934. In German. 1.50

398-411 PB L 73331 — Selection of solvents for chlorinated rubber lacquers. By W. Zander, 1934. In German. 1.50

412-420 PB L 73331 — The effect of the methanol ballast in the production of formaldehyde. By Wiesler, 1934. In German. 1.50

421-425 PB L 73331 — Aging of chlorinated rubber paints. By Zander, 1934. In German. 1.50

426-432 PB L 73331 — Preparation of formaldehyde from methanol using two catalyst stages. By Wiesler, 1934. In German. 1.50

433-439 PB L 73331 — Tar oil rectification with regard to the production of guaiacol. By Schulz, 1934. In German. 1.50

440-441 PB L 73331 — Concentrating aqueous acetic acid by distillation in columns with wooden filling bodies. By Grunert, 1934. In German. 1.50

442-449 PB L 73331 — Start of operation of a new formaldehyde plant. By Kemmer, 1934. In German. 1.50

450-452 PB L 73331 — Formaldehyde tests by means of a 30 mm copper tube. By Kemmer, 1934. In German. 1.50

453-458 PB L 73331 — Production of guaiacol. By Schulz, 1934. In German. 1.50

459-662 PB L 73331 — Production of butyl alcohol from ethyl alcohol in one operation. By Querfurth, 1934. In German. 20.50

663-676 PB L 73331 — Production of thiopropionic acid. By Grunert, 1934. In German. 1.50

677-680 PB L 73331 — Purification of residual acid, containing propionic and butyric acid, from the acetic acid plant. By Werner, 1934. In German. 1.50

681-684 PB L 73331 — Washing of precipitated acetyl cellulose. By Werner, 1934. In German. 1.50

685-692 PB L 73331 — Thermostability of cellulose triacetate and cellulose tripropionate films with and without plasticizers. By Werner, 1934. In German. 1.50

693-696 PB L 73331 — Centrifuging tests with film waste solutions. By Nagel, 1934. In German. 1.50

697-713 PB L 73331 — Lignin carbonization. By Wiesler. 1934. In German. 2.00

714-725 PB L 73331 — Cellulose triacetate solutions and the water absorption of their products as wet and dry films. By Werner, 1934. In German. 1.50

726-731 PB L 73331 — Mixed ester solutions for the wet casting process and water absorption of their products as wet and dry films. By Werner, 1934. In German. 1.50

732-734 PB L 73331 — Improving the inflammability of charcoal by impregnation with metal salt solutions. By A. Peter, 1934. In German. 1.50

735-740 PB L 73331 — Preparation of plastic materials. By Werner, 1934. In German. 1.50

741-748 PB L 73331 — Pyrogallol dimethyl ether and its accompanying substances from wood tar oil. By Schulze, 1934. In German. 1.50

749-754 PB L 73331 — Purification of butyric acid residues. By Werner, 1934. In German. 1.50

755-766 PB L 73331 — Production of acetaldehyde from acetylene. By Schmoche, 1934. In German. 1.50

767-769 PB L 73331 — Formaldehyde tests. By Kemmer, 1934. In German. 1.50

770-771 PB L 73331 — Purification of synthetic methanol. By Hensinger. In German. 1.50

772-775 PB L 73331 — Chlorination of a pentane fraction in the gas phase to give amyl chloride. By Konig, 1934. In German. 1.50

776-779 PB L 73331 — Centrifuging tests with nitro cellulose waste solutions. By Nagel, 1934. In German. 1.50

780-794 PB L 73331 — Tests on alcohol ketonization. By Wiesler, 1934. In German. 1.50

795-812 PB L 73331 — Increased through puts in the production of acetone from ethyl alcohol, using zinc-iron-manganese catalysts. By Querfurth, 1934. In German. 2.00

813-825 PB L 73331 — Checking the stability of formaldehyde solutions. By Schmache, 1934. In German. 1.50

826-831 PB L 73331 — Tests with a pumice catalyst in the preparation of formaldehyde. By Kenner, 1934. In German. 1.50

832-839 PB L 73331 — Analysis of wood saccharification products. By Wiesler, 1934. In German. 1.50

840-844 PB L 73331 — Checking the solubility of potassium or sodium acetate in abs. alcohol. By Schmache, 1934. In German. 1.50

845-853 PB L 73331 — Influence of the potassium acetate content of potassium-sodium acetate mixtures on the tendency of salt separation during dehydration. By Schmache, 1934. In German. 1.50

854-882 PB L 73331 — Behavior of charcoal to atmospheric oxygen and water vapor at temperatures from 100 to 300° C. By Peter, 1934. In German. 3.00

883-886 PB L 73331 — Chlorination of hexane in the gaseous phase to hexyl chloride. By König, 1934. In German. 1.50

887-890 PB L 73331 — Tests with two catalysts for the production of butyl alcohol from ethyl alcohol. By Querfurth, 1934. In German. 1.50

PB L 73331-S. GOLD UND SILBERSCHEIDEANSTALT, KONSTANZ, GERMANY. A collection of laboratory reports of the Hiag-Verein, Frankfurt. (FIAT Microfilm Reel M 30, Frames 1-890, abstract cards). 1933-1934. 92 P. Price: Microfilm-$5.00 - Photostat-$7.00
These are short abstracts of the items on FIAT microfilm reel M 30 (PB L 73331) described above. They were prepared by FIAT abstracters in Germany.

PB L 73332. DEUTSCHE GOLD UND SILBERSCHEIDEANSTALT, KONSTANZ, GERMANY. A collection of laboratory reports on organic chemicals. (FIAT Microfilm Reel M 33, Frames 2830-3829) 1937-1938. 999 f. Price: Microfilm-$6.00 - Enlargement print-$100.00
This FIAT microfilm reel consists of 142 items which originated in the laboratories of the Hiag-Verein, Frankfurt. Individual items are listed below and will be available as enlargement prints only; the entire reel may be purchased in microfilm form for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

Frames	Title	Price
2830-2833 PB L 73332	Hydrogenation of furfural. By Hupe. 1937. In German.	$1.50
2834-2838 PB L 73332	Preparation of propionic acid from ethanol and carbon monoxide. By Hupe. 1937. In German.	1.50
2839-2842 PB L 73332	Paraformaldehyde precipitated in an alkaline medium. By Hensinger. 1937. In German.	1.50
2843-2849 PB L 73332	Obtaining creosote from Bodenfeld "Tauchtopfteer" (product of the tar receiver). By Gabel. 1937. In German.	1.50
2850-2855 PB L 73332	Determination of terpineol in turpentine oil products. By Müller. 1937. In German.	1.50
2856-2864 2940-2945 PB L 73332	Forerun and later fractions of the product processed from Finnish crude sulfate turpentine oil. By Müller. 1937. In German.	1.50
2865-2868 PB L 73332	Products from processed crude sulfate turpentine oil and their dependence on density and alcohol content. By Müller. 1937. In German.	1.50
2869-2872 2946-2948 PB L 73332	Forerun and later fractions from German crude sulfate turpentine oil. By Müller. 1937. In German.	1.50
2873-2882 PB L 73332	Pine oils and allied products in comparison with byproducts occurring during the processing of crude sulfate turpentine oils. By Müller. 1937. In German.	1.50
2883-2899 PB L 73332	Concentration of aqueous formaldehyde solutions (30 percent by volume) by vacuum evaporization, with and without the use of a column. By Schmäche. 1937. In German.	2.00
2900-2903 PB L 73332	Investigation of distillates obtained by means of a Wecker apparatus (apparatus for steam distillation in vacuum). By Wagner. 1937. In German.	1.50
2904-2910 PB L 73332	Obtaining pure tetrahydro-furfuryl alcohol from the crude discharge liquid obtained during hydrogenation of furfural. By Prodinger. 1937. In German.	1.50
2911-2912 PB L 73332	Lignin coal. 1937. In German.	1.50
2913-2920 PB L 73332	Carbonization of beech-wood lignin. By Leyerzapf. 1937. In German.	1.50
2921-2925 PB L 73332	Examination of textile fabrics, particularly for producing collars from pure cotton or from yarns containing 84 percent cotton and 16 percent cellulose wool; these yarns may or may not be impregnated with solutions of triacetate. By Werner. 1937. In German.	1.50
2926-2928 PB L 73332	Examination of furfural from oils obtained as a byproduct in a column for concentration of wood alcohol. By Gabel. 1937. In German.	1.50
2929-2933 PB L 73332	Quantitative analysis of acetaldehyde in mixtures of acetaldehyde and formaldehyde. By Wagner. 1937. In German.	1.50
2934-2939 PB L 73332	Behavior of hydrated sulfate-turpentine oils during distillation. By Fröhlich. 1937. In German.	1.50
2940-2945 PB L 73332	See frames 2856-2864.	
2946-2948 PB L 73332	See frames 2869-2872.	
2949-2955 PB L 73332	Evaporation of pyroligneous acid. By Fröhlich. 1937. In German. May not reproduce well.	1.50
2956-2957 PB L 73332	Production of furfural. By Gabel. 1937. In German.	1.50

2958-2961 PB L 73332 — Working up sulfate-turpentine oil. By Müller. 1937. In German. May not reproduce well. 1.50

2962-2963 PB L 73332 — Washing out and recovering hydrogen sulfide. By Dittrich. 1937. In German. 1.50

2964-2970 PB L 73332 — Preparation of acetoacetic ester. By Prodinger. 1937. In German. 1.50

2971-2973 PB L 73332 — Examination of crude sulfate-turpentine oil. By Müller. 1937. In German. 1.50

2974-2983 PB L 73332 — Determination of the total methanol in pyroligneous acid. By Schmälche. 1937. In German. 1.50

2984-2991 PB L 73332 — Working up the residues of the crude sulfate-turpentine oil processing. By Müller. 1937. In German. This document may not reproduce well. 1.50

2992-2993 PB L 73332 — Later fractions of the processing of Finnish and German turpentine oils. By Müller. 1937. In German. 1.50

2994-3002 PB L 73332 — Refractive index of turpentine oil. By Müller. 1937. In German. 1.50

3003-3005 PB L 73332 — Working up sulfate turpentine oil. By Müller. 1937. In German. 1.50

3006-3008 PB L 73332 — Carbonization of Chilean wood. By Gaul and Leyersapf. 1937. In German. 1.50

3009-3012 PB L 73332 — Carbon monoxide black. By Dittrich. 1937. In German. 1.50

3013-3018 PB L 73332 — "Tauchtopfteer" (receiver tar). By Gabel. 1937. In German. 1.50

3019-3030 PB L 73332 — Production of spun fibers from freshly saponified solutions of polymerized ethyl silicate. By Werner. 1937. In German. 1.50

3031-3042 PB L 73332 — "Böttenteer" (tar separating in the distillate) and "Absitzteer" (tar separating only after long standing). By Gabel. 1937. In German. 1.50

3043-3047 PB L 73332 — Furfural, guaiacol, and creosote from oil of the fractionating column. By Gabel. 1937. In German. 1.50

3048-3054 PB L 73332 — Guaiacol and creosote from "Teerblasenöl" (oil from the tar still). By Gabel. 1937. In German. 1.50

3055-3056 PB L 73332 — Carbonization of lignin. By Müller. 1937. In German. 1.50

3057-3068 PB L 73332 — Admixture of wood alcohol to gasoline. By Brendlein. 1937. In German. 1.50

3069-3073 PB L 73332 — Efficiency of methoxylated derivatives of hydroquinone as photographic developers. By Schultes. 1937. In German. 1.50

3074-3077 PB L 73332 — Carbonization of lignin. By Müller. 1937. In German. 1.50

3078-3081 PB L 73332 — Oxidation of pyrogallol dimethyl ether to 2,6-dimethoxyquinone. By Schultes. 1937. In German. 1.50

3082-3086 PB L 73332 — Calcium lignin sulfonate from sulfite pulp waste liquor. By Froelich. 1937. In German. 1.50

3087-3096 PB L 73332 — Preparation of pure pyrogallol dimethyl ether with ammonia. By Schultes. 1937. In German. 1.50

3097-3109 PB L 73332 — Examination and preparation of Kaurit glue. By Froelich. 1937. In German. May not reproduce well. 1.50

3110-3113 PB L 73332 — Preparation of ammonium amylxanthate. By Prodinger. 1937. In German. 1.50

3114-3118 PB L 73332 — Deacidification of formaldehyde (30 percent by volume) with the help of activated carbon reacting alkaline. By Schmälche. 1937. In German. 1.50

3119-3123 PB L 73332 — Guaiacol and creosote from oil of fractionating columns. By Gabel. 1937. In German. 1.50

3124-3127 PB L 73332 — Later fractions from the processing of Finnish and German crude sulfate turpentine oil. By Müller. 1937. In German. 1.50

3128-3133 PB L 73332 — Working up the residues of the crude sulfate-turpentine oil processing. By Müller. 1937. In German. 1.50

3134-3140 PB L 73332 — Distillation of crude pyroligneous acid. By Fröhlich. 1937. In German. 1.50

3141-3143 PB L 73332 — Preparation of diethylketone from propionic acid by a continuous method. By Querfurth. 1937. In German. 1.50

3144-3147 PB L 73332 — Addition products for powdery foam fire extinguishers. By Nagel. 1937. In German. 1.50

3148-3150 PB L 73332 — Later fractions from the processing of crude sulfate-turpentine oil, in the case of German and Finnish oils. By Müller. 1937. In German. 1.50

3151-3153 PB L 73332 — 3-Methyl-1-butanol ("inactive amylalcohol") from normal butanol and methanol. By Querfurth. 1937. In German. 1.50

3154-3166 PB L 73332 — Mechanical properties of sheets and films made of cellulose triacetate. By Werner. 1937. In German. 1.50

3167-3171 PB L 73332 — Experiments for comparing catalysts mounted on carriers and catalysts obtained by combined precipitation of two metals, to clarify the patent situation concerning the preparation of higher alcohols from acetaldehyde. By Querfurth. 1937. In German. 1.50

3172-3176 PB L 73332 — Carbonization of lignin. By Müller. 1937. In German. 1.50

3177-3187 PB L 73332 — Starting a plant for making acetone cyanohydrin (2-hydroxy-2-methylpropane nitrile) in Novarra, Italy. By Schulz. 1937. In German. 1.50

3188-3194 PB L 73332 — Studies on cellulose acetate. By Werner. 1937. In German. May not reproduce well. 1.50

3195-3198 PB L 73332 — Application of the pulsation method for wood carbonization. By Gaul. 1937. In German. 1.50

3199-3208 PB L 73332 — Rectification of later fractions from Finnish crude sulfate-turpentine oil. By Müller. 1937. In German. 1.50

3209-3214 PB L 73332 — Rectification of later fractions from German crude sulfate-tur-

pentine oil. By Müller. 1937. In German. 1.50
May not reproduce well.

3215-3230 PB L 73332 — Optical rotation of turpentine oil products. By Müller. 1937. In German. 2.00
May not reproduce well.

3231-3248 PB L 73332 — Examination of turpentine oil foam producers. By Müller. 1937. In German. 2.00
May not reproduce well.

3249-3256 PB L 73332 — Turpentine oil foam producer. By Müller. 1937. In German. 1.50

3257-3262 PB L 73332 — Continuous processing of tars. By Selb. 1937. In German. 1.50
May not reproduce well.

3263-3265 PB L 73332 — Determination of phenol in the flotation oil. By Schulz. 1937. In German. 1.50
May not reproduce well.

3266-3272 PB L 73332 — Rubber plasticizers. By Gaul. 1937. In German. 1.50

3273-3279 PB L 73332 — Acrylic ester. By Schulz. 1937. In German. 1.50
May not reproduce well.

3280-3283 PB L 73332 — Caproic and valeric acid obtained from n-hexyl alcohol and commercial iso-amylalcohol by oxidation with caustic alkali under increased pressure. By Querfurth. 1937. In German. 1.50

3284-3288 PB L 73332 — Testing oil foam producers obtained from rectified later fractions. By Müller. 1937. In German. 1.50

3289-3299 PB L 73332 — Determination of furfural. By Brendlein. 1937. In German. 1.50
May not reproduce well.

3300-3304 PB L 73332 — Methylfurfural in oil (obtained in cracking columns). By Brendlein. 1937. In German. 1.50

3305-3308 PB L 73332 — Properties of various oils, alcohols, and foam producers, as determined by flotation tests. By Müller. 1937. In German. 1.50

3309-3313 PB L 73332 — Turpentine oil foam producer. By Müller. 1937. In German. 1.50

3314-3318 PB L 73332 — Testing the foaming properties of oils from rectified later fractions. By Müller. 1937. In German. 1.50

3319-3336 PB L 73332 — Influence of the material of the equipment on the concentration of formaldehyde solutions (30 percent by volume) carried out by vacuum distillation with and without use of a column. By Leyerzapf. 1937. In German. 2.00

3337-3347 PB L 73332 — Wet spinning experiments with acetic cellulose triacetate solutions. By Werner. 1937. In German. 1.50
May not reproduce well.

3348-3352 PB L 73332 — Stabilization of cellulose triacetate solutions. By Werner. 1937. In German. 1.50
May not reproduce well.

3353-3359 PB L 73332 — Acetylation of wood cellulose. By Werner. 1937. In German. 1.50

3360-3364 PB L 73332 — Use of beech-wood tar products as addition agents in the reclaiming of rubber. By Gaul. 1937. In German. 1.50

3365-3379 PB L 73332 — Hydration of crude sulfate-turpentine oil. First part: Addition of hydrogen chloride on the above substance. By Müller. 1937. In German. 1.50

3380-3418 PB L 73332 — Hydration of crude sulfate-turpentine oil. Second part: Saponification of hydrochlorinated turpentine oil. By Müller. 1937. In German. 4.00

3419-3433 PB L 73332 — Resin from wood alcohol oil. By Gabel. 1937. In German. 1.50

3434-3437 PB L 73332 — Oxidation of turpentine oil. By Müller. 1937. In German. 1.50
May not reproduce well.

3438-3444 PB L 73332 — Hot pressing of lignin. By Leyerzapf. 1937. In German. 1.50

3445-3460 PB L 73332 — Examination of tar oils for coal flotation. By Müller. 1937. In German. 2.00

3461-3467 PB L 73332 — Steam or vacuum distillation of turpentine oils for preparation of foam producing oils. By Müller. 1937. In German. 1.50

3468-3475 PB L 73332 — Cracking of oil by means of the electric arc (Jakoski's method). By Woltersdorf. 1937. In German. 1.50

3476-3484 PB L 73332 — Cracking of oil by means of the electric arc. The electrical conditions for the experiment. By Woltersdorf. 1937. In German. 1.50

3485-3494 PB L 73332 — Cracking of oil by means of the electric arc. Arrangement of the experiment. By Woltersdorf. 1937. In German. 1.50

3495-3500 PB L 73332 — Lignin tar from carbonization experiments at Bruchhausen. By Schultes and Gabel. 1937. In German. 1.50

3501-3517 PB L 73332 — Surface tension of foam producing oils dissolved in water. By Müller. 1937. In German. 2.00

3518-3521 PB L 73332 — Surface tension of aqueous tar oil solutions. By Müller. 1937. In German. 1.50

3522-3525 PB L 73332 — Lignin tar from carbonization experiments at Oeventrop in 1934. By Schultes. 1937. In German. 1.50

3526-3529 PB L 73332 — Carbon monoxide black. By Dittrich. 1937. In German. 1.50

3530-3532 PB L 73332 — Acetoacetic ester. By Prodinger. 1937. In German. 1.50

3533-3544 PB L 73332 — Behavior of mixtures of n-butyraldehyde, ethyl alcohol, acetic ester, and water, during distillation. By Prodinger. 1937. In German. 1.50

3545-3553 PB L 73332 — Comparison of the reactivity of various low temperature carbonization cokes with that of charcoal. By Schultes. 1937. In German. 1.50

3554-3562 PB L 73332 — Carbonization of products obtained by the hot pressing of lignin. By Leyerzapf. 1937. In German. 1.50

3563 PB L 73332 — This frame is missing.

3564-3568 PB L 73332 — Comparison of the lignin tars from Bruchhausen and Oeventrup.

By Schultes and Gabel. 1937. In German. 1.50

3569-3584 PB L 73332 — Preparation of acrolein from acetaldehyde and formaldehyde by means of an aluminum phosphate catalyst. By Wagner. 1937. In German. 2.00

3585-3593 PB L 73332 — Measuring the surface tension of aqueous solutions of hydrated turpentine oils. By Müller. 1937. In German. 1.50

3594-3599 PB L 73332 — Experiments for determining the gas flow in catalytic apparatus, particularly through finding the influence of heat motion. By Müller. 1937. In German. 1.50

3600-3606 PB L 73332 — Pressure extraction of beech-wood shavings by means of tetralin. By Fröhlich. 1937. In German. 1.50

3607-3615 PB L 73332 — Purification of paper waste liquor. By Müller. 1937. In German. 1.50

3616-3620 PB L 73332 — Large scale production of pyrogallol dimethyl ether. By Seil. 1937. In German. 1.50

3621 PB L 73332 — This frame is missing.

3622-3629 PB L 73332 — Processing of residues from the turpentine oil distillation. By Müller. 1937. In German. 1.50

3630-3636 PB L 73332 — Testing the foaming properties of oils obtained from the rectified later fractions of Swedish crude oil. By Müller. 1937. In German. 1.50

3637-3639 PB L 73332 — Treatment of sulfate-turpentine oil residues with sodium bisulfate. By Fröhlich. 1937. In German. 1.50

3640-3643 PB L 73332 — Preparation of terpenes from turpentine oil. By Fröhlich. 1938. In German. 1.50

3644-3648 PB L 73332 — Hydration of crude sulfate-turpentine oil (final experiments). By Müller. 1938. In German. 1.50

3649-3652 PB L 73332 — Foam producer "Hiag FT." By Müller. 1938. In German. 1.50

3653-3657 PB L 73332 — Preparation of condensation products from terpenes and maleic anhydride. By Fröhlich. 1938. In German. 1.50

3658-3666 PB L 73332 — Preparation of synthetic resins from pentaerythritol and condensation products of terpenes with maleic anhydride or directly from the individual components. By Fröhlich. 1938. In German. 1.50

3667-3672 PB L 73332 — Wet spinning experiments with acetic cellulose triacetate solutions. By Werner. 1938. In German. 1.50

3673-3677 PB L 73332 — Crystallization of pyrogallol. By Gaul. 1938. In German. 1.50

3678-3683 PB L 73332 — Addition of formaldehyde on turpentine oil. By Fröhlich. 1938. In German. 1.50

3684-3687 PB L 73332 — Preparation of tin tetramethyl. By Schultes. 1938. In German. 1.50

3688-3700 PB L 73332 — Preparation of salicylanilide and p-chloro-m-cresol preparations as protective agents for materials of any kind against attack by fungi and similar pests. By Schmiche. 1938. In German. 1.50

3701-3713 PB L 73332 — Pilot plant experiments for the pressure distillation of dilute solutions of formaldehyde. By Hensinger. 1938. In German. 1.50

3714-3719 PB L 73332 — Treatment of high-boiling tar oil with zinc dust. By Fröhlich. 1938. In German. 1.50

3720-3727 PB L 73332 — Analysis of technical xanthates. By Fröhlich. 1938. In German. 1.50

3728-3734 PB L 73332 — Preparation of potassium ethyl xanthate. By Hensinger. 1938. In German. 1.50

3735-3740 PB L 73332 — Inhibitors. By Schultes. 1938. In German. 1.50

3741-3743 PB L 73332 — Composition of the liquid mixtures during the cooling of mixtures of formaldehyde and methanol vapors. By Hensinger. 1938. In German. 1.50

3744-3747 PB L 73332 — Pentaerythritol. By Hensinger. 1938. In German. 1.50

3748-3759 PB L 73332 — Carbonization of Bergius lignin. By Leyerzapf. 1938. In German. 1.50

3760-3767 PB L 73332 — Lignin tar from carbonization experiments with Bergius lignin. By Gabel. 1938. In German. 1.50

3768-3770 PB L 73332 — Obtaining glycerol from "Curbay" (American concentrated residual liquor from molasses). By Frodinger. 1938. In German. 1.50

3771-3773 PB L 73332 — Higher alcohols from a mixture of methanol and ethanol over the Fröhlich catalyst (containing Zn, Mn, Cr, and K). By Querfurth. 1938. In German. 1.50

3774-3789 PB L 73332 — Forerun fatty acids from the paraffin oxidation of Henkel & Co., Düsseldorf. By Querfurth. 1938. In German. 2.00

3790-3796 PB L 73332 — Pressed material, consisting of one substance, as catalyst for the methanol synthesis. By Brendlein. 1938. In German. 1.50

3797-3800 PB L 73332 — Preparation of glycerolaldehyde from 2,3-dibromo propanal (acrolein dibromide). By Wagner. 1938. In German. 1.50

3801-3805 PB L 73332 — Acetaldehyde from acetylene and water vapor. By Dittrich. 1938. In German. 1.50

3806-3813 PB L 73332 — Examination of a product obtained in the extraction of lignin with tar oil having a high boiling point. By Gabel. 1938. In German. 1.50

3814-3822 PB L 73332 — Acetone cyanohydrin. By Schuls. 1938. In German. 1.50

3823-3826 PB L 73332 — Chlorination of lignin. By Frodinger. 1938. In German. 1.50

3827-3829 Preparation of methyl bromide.
PB L 73332 By Prodinger. 1938. In German. 1.50

PB L 73332-S. DEUTSCHE GOLD UND SILBERSCHEIDEANSTALT, KONSTANZ, GERMANY. A collection of laboratory reports on organic chemicals. (FIAT Microfilm Reel M 33, Frames 2830-3829, abstract cards) 1937-1938. 165 p.
Price: Microfilm-$4.00 - Photostat-$11.00
These are short abstracts of the items on reel M.33 (PB 73332) described above. They were prepared by FIAT abstracters in Germany.

*PB L 78253. DIAMOND, C. Manufacture of cellulose acetate by the methylene chloride process with acid recovery and Wacker anhydride process (Dormagen). (BIOS Final Rept 1204, Item 22). Mar 1947. 23 p. Price: Microfilm-$1.00 - Photostat-$2.00
The report describes the various stages in the production of cellulose acetate at the I.G. Dormagen plant. The methylene chloride is recovered by distillation. The acetic acid is recovered by extraction with ethyl acetate followed by azeotropic distillation of the extracted mixture. A description is also given of the manufacture of acetic acid by the Wacker Process. The anhydride is made by catalytic separation of water from glacial acetic acid under reduced pressure. Diagrams illustrate the production of cellulose and the pneumatic handling of cellulose.

*PB L 77675. DIRENGA, O. G. and LEAPER, P. J. Manufacture of diethylamine from acetaldehyde. I.G. Farbenindustrie A. G., Ludwigshafen. (FIAT Final Rept 1081). Apr 1947. 19 p. Price: Mimeo-$0.50
This report covers the manufacture of diethylamine, and the by-products monoethylamine and triethylamine, from acetaldehyde at Ludwigshafen. The manufacture of the corresponding butylamines is also discussed. A vapor phase catalytic process is used in which acetaldehyde is hydrogenated with hydrogen and reacted with ammonia to form the ethylamines. The reaction is exothermic and cooling must be provided to maintain the temperature of the catalyst at approximately 110-140° C., the optimum temperature depending on the activity of the catalyst. The process is conducted at approximately atmospheric pressure. The by-products monoethylamine and triethylamine are separated from the diethylamine and from the water formed by fractional distillation, and are normally returned to the reactor for conversion to diethylamine. The preparation of the catalyst is also described in this report. Two flow diagrams are included.

*PB L 78667. DUNLOP, R. D. The production and use of polyvinyl alcohol. (FIAT Final Rept 1110). Apr 1947. 14 p. Price: Mimeo-$0.50
Polyvinyl alcohols are produced by I.G. Farbenindustrie, Hoechst, and Dr. Alexander Wacker G.m.b.H., Burghausen. I.G. Farbenindustrie produces polyvinyl alcohol by hydrolysing or saponifying, vinyl acetate in methanol by means of an acid catalyst. Wacker utilises small quantities of alkali as the catalyst for the hydrolysis. Both producers were the major consumers of their own products. In both cases the product was used as an emulsifying agent. There are a variety of other small applications. One of the most interesting applications is the production of plastics of unusual toughness. This report should be considered one of the series of FIAT Reports on the utilisation of vinyl acetate and the conversion of that material into useful resins.

PB L 19585-T. GIRSTNER. Development of the Wofatite process as a recovery process for copper and ammonia from cuprammonium spinning waters. Mar 1945. 7 p.
Price: Microfilm-$1.00 - Photostat-$1.00
This document is a translation of a report on the operation of the I. G. Dormagen process. A special Wofatite exchange resin for copper recovery is a gel, formed from phenol (about 40% by weight) and formaldehyde and containing active $-SO_3H$ groups. These groups act on the spinning water, containing Cu $(NH_3)_4$ ions as collecting groups. The true copper absorbing groups are the free phenolic hydroxyl groups. Copper is quantitatively absorbed as Cu $(NH_3)_2$ complex. The ammoniacal effluent is sent immediately to the ammonia recovery system. The filter is regenerated by means of the copper-containing acid spinning water, issuing from the plant. By this process, regenerate copper is continuously precipitated as a basic copper sulfate, eliminating the copper cementation process, and ammonia recovered, which up to now, was lost. Two flow diagrams are included. For the original German report, see PB 19585, v. 2, p. 618, this Bibliography.

*PB L 80393. GOEPP, R. MAX, JR. The I.G. Hoechst glycerogen process. (FIAT Final Rept 872). Jun 1947. 51 p. Price: Mimeo-$1.50
The manufacture of glycerogen, a glycerol substitute consisting of glycols, glycerol, erythritol, hexitols and other unidentified compounds, at I.G. Hoechst, by the continuous hydrogenolysis of invert sugar, is described. A flow sheet, drawings of the special pressure release valves and separator, excerpts from operating log books, cost data, catalyst preparation, and data on the special steels used are included.

PB L 74127. I. G. FARBENINDUSTRIE A. G., BITTERFELD, GERMANY. Chromium ores, smoke-screen mixtures, and miscellaneous chemical and metallurgical processes. (FIAT Microfilm Reel CC 195, Frames 2643-3352, not numbered consecutively.) 1927-1945. 336 F. Price: Microfilm-$4.00 - Enlargement Print-$34.00
This microfilm reel consists of 46 reports on chromium compounds, chromium ore dressing, smoke screens, production of niobium and steel, synthetic rubber, graphite lubricants, etc. The individual reports, listed below will be available as enlargement prints only; the entire reel may be purchased in microfilm form for $4.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

Frames	Title	Price
2643-2644 PB L 74127	Production of chromic hydroxide from chromic chloride. May 1930. In German.	$1.50
2645-2650 PB L 74127	These frames are missing.	
2651-2656 PB L 74127	Current output in electrolytic reduction of $KCrO_4$ liquor. Nov 1928. In German.	1.50
2657-2664 PB L 74127	Dressing chromium ores in the Dorr classifier. Nov 1927. In German.	1.50
2665-2681 PB L 74127	These frames are missing.	
2682-2685 PB L 74127	Production of chromic chloride. Oct 1930. In German.	1.50
2686-2689 PB L 74127	These frames are cancelled.	
2690-2691 PB L 74127	Chlorination of chromium ores. n. d. In German.	1.50
2692-2697 PB L 74127	These frames are missing.	
2698-2702 PB L 74127	Investigations on the chlorination of chromium ores. Feb 1930. In German.	1.50
2703 PB L 74127	This frame is cancelled.	
2704 PB L 74127	Estimated costs of chromic chloride condensation. Aug 1930. In German.	1.50
2705-2718 PB L 74127	These frames are missing.	

Miscellaneous Chemicals (contd)

2719-2721 PB L 74127 — Investigation of smoke screen apparatus at I. G., Bitterfeld. Dec 1944. In German. 1.50

2740-2753 PB L 74127 — Conference on auxiliary smoke screen installations held at Watenstedt. Nov 1944. In German. 1.50

2754-2762 PB L 74127 — These frames are missing.

2763 PB L 74127 — Results of gas laying tests initiated by hydrochloric acid at the Limburger Hof Experimental station. Oct 1944. In German. 1.50

2764-2787 PB L 74127 — These frames are missing.

2788-2789 PB L 74127 — Conference on smoke screen problems. Oct 1944. In German. 1.50

2790-2797 PB L 74127 — These frames are cancelled.

2798 PB L 74127 — Notes on a jet for atomization of 4000 liters per hour. Oct 1944. In German. 1.50

2799-2872 PB L 74127 — These frames are missing.

2873-2877 PB L 74127 — Calculations for the length of a steam jet based on the volume of steam, climatic conditions, and turbulence. Sep 1944. In German. 1.50

2878-2926 PB L 74127 — These frames are missing.

2927-2928 PB L 74127 — Auxiliary smoke screen measures for chemical plants. Jul 1944. In German. 1.50

2929-2972 PB L 74127 — These frames are missing.

2973-2974 PB L 74127 — Notes and correspondence on smoke screen measures for the I. G. Farben Film plant at Wolfen. Dec 1944. In German. 1.50

2975-2981 PB L 74127 — Firing tests with a coal tar-sawdust-saltpeter mixture. (for smoke screens). Dec 1944. In German. 1.50

2982-3014 PB L 74127 — These frames are missing.

3015-3020 PB L 74127 — Development of "Longmuir-fog" at the I. G. film factory, Wolfen. Nov 1944. In German. 1.50

3021-3045 PB L 74127 — These frames are missing.

3046-3053 PB L 74127 — Smoke screen mixtures. Nov 1944. In German. 1.50

3054-3060 PB L 74127 — Potassium chloride-ammonium nitrate mixture for smoke screens. Oct 1944. In German. 1.50

3061-3067 PB L 74127 — These frames are cancelled.

3068-3071 PB L 74127 — Camouflaging the I. G. Wolfen plant with an ammonium chloride smoke screen. Sep 1944. In German. 1.50

3072-3074 PB L 74127 — Notes on auxiliary smoke screen systems. Sep 1944. In German. 1.50

3075-3083 PB L 74127 — Continuation of frames 3054-3060. Oct 1944. In German. 1.50

3084-3089 PB L 74127 — These frames are cancelled.

3090-3095 PB L 74127 — Berger-type smoke agents. Aug 1944. In German. 1.50

3096 PB L 74127 — This frame is cancelled.

3097-3100 PB L 74127 — See frames 3054-3060. Aug 1944. In German. 1.50

3101 PB L 74127 — This frame is cancelled.

3102-3128 PB L 74127 — Smoke screens for the Bitterfeld industrial area. Aug 1944. In German. 3.00

3129-3159 PB L 74127 — Black and white smoke screens. Jul 1944. In German. 3.50

3160-3179 PB L 74127 — Preparation and results of smoke camouflage at Bitterfeld. Jun 1944. In German. 2.00

3180-3192 PB L 74127 — Continuation of frames 3129-3159. Jul 1944.. In German. 1.50

3193-3207 PB L 74127 — Impregnation of TNR-carbon and loading with chemical warfare agents. Apr 1944. In German. 1.50

3208-3209 PB L 74127 — Nitrogen-containing austenitic steels. Dec 1944. In German. 1.50

3210 PB L 74127 — Dressing of pyritiferous chivaletite ore. Dec 1944. In German. 1.50

3211-3212 PB L 74127 — Vanadic acid briquettes in steel production. Nov 1944. In German. 1.50

3213-3217 PB L 74127 — Recovery of basic slag from iron phosphide alloys. Oct 1944. In German. 1.50

3218-3219 PB L 74127 — Manganese production. Nov 1944. In German. 1.50

3220-3221 PB L 74127 — Hydrogen analysis in steel. Oct 1944. In German. 1.50

3222-3234 PB L 74127 — Elementary phosphorous and vanadium from basic slag. Oct 1944. In German. 1.50

3235 PB L 74127 — This frame is cancelled.

3236 PB L 74127 — Vanadic acid for vanadium-aluminum. Aug 1944. In German. 1.50

3237-3238 PB L 74127 — Niobium production, using niobic lime. Aug 1944. In German. 1.50

3239 PB L 74127 — This frame is cancelled.

3240-3248 PB L 74127 — Travel report on recent developments in dephosphorization of manganese ore, iron powder, titanium carbide production, etc. Jul 1944. In German. 1.50

3249-3273 PB L 74127 — These frames are cancelled.

3274-3275 PB L 74127 — Basic steel production. May 1944. In German. 1.50

3276-3277 PB L 74127 — These frames are cancelled.

3278-3282 PB L 74127 — Results of miscellaneous tests at Wolfen. Jul 1944. In German. 1.50

3283-3290 PB L 74127 — These frames are cancelled.

Miscellaneous Chemicals (contd)

3291-3300 PB L 74127 — Tests with vanadic acid briquettes. Feb 1944. In German. 1.50

3301-3310 PB L 74127 — These frames are missing.

3311-3319 PB L 74127 — Production of synthetic rubber ($PNCl_2$) x polymers. Apr 1944. In German. 1.50

3320-3321 PB L 74127 — These frames are cancelled.

3322-3323 PB L 74127 — See frames 3311-3319. Feb 1944. In German. 1.50

3324-3326 PB L 74127 — These frames are cancelled.

3327-3330 PB L 74127 — Extracted inorganic rubber and its uses. Oct 1944. In German. 1.50

3331-3333 PB L 74127 — These frames are cancelled.

3333A-3337 PB L 74127 — Microstructure of zirconium powder. Sep 1944. In German. 1.50

3338-3342 PB L 74127 — New uses for "Igurit" (graphite impregnated with phenol-formaldehyde-synthetic resins.) Mar 1945. In German. 1.50

3343-3352 PB L 74127 — Development of colloidal graphite lubricants. Jan 1945. In German. 1.50

PB L 70256. I. G. FARBENINDUSTRIE A. G., FRANKFURT-HÖCHST, GERMANY. Instructions for the preparation of dye intermediates and other organic substances. (FIAT Microfilm Reel A 34, Frames 9195-9999 and 1-8). 1929-1944. 913 f. Price: Microfilm-$6.00 - Enlargement Print-$91.50
This FIAT microfilm reel consists mainly of items in the field of dye chemistry. 80 individual items are listed below and will be available as enlargement prints only; the entire reel may be purchased in microfilm form for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

Frames	Title	Price
9195-9196 PB L 70256	Preparation of "M IV Phenol". By Schild. 1936. In German.	$1.50
9197-9207 PB L 70256	Preparation of stearo hydroxymethyl-pyridinium chloride ("Hoe 150"). By Eckelmann and Freudenberger. 1938. In German.	1.50
9208-9248 PB L 70256	Preparation of stearic acid amide and stearic methylolamide ("Persistol LA", "Hoe 1141"). By Balle and others. 1935-1939. In German.	4.50
9249-9254 PB L 70256	Preparation of "Patentblau V Leucobase." By Loth. 1938. In German.	1.50
9255-9261 PB L 70256	Glycerogen and hexanetriol esters of an aliphatic carboxylic acid with an 8-carbon-chain. By Bücking. 1938. In German.	1.50
9262-9270 PB L 70256	Preparation of "Tetramidine" (phenyl tetrahydroquinolyl formamidine). By Fischer. 1938-1940. In German.	1.50
9271-9276 PB L 70256	Preparation of "Pigmentechtviolettbase" in o-dichlorobenzene. Condensation and ring closure in one operation. By Thiele. 1937. In German.	1.50
9277-9290 PB L 70256	Preparation of phenylimino diacetic acid and several derivatives. By Streeck and Grom. 1938-1939. In German.	1.50
9291-9292 PB L 70256	Preparation of p-nitrobenzoyl acetic ester. By Lang. 1938. In German.	1.50
9293-9314 PB L 70256	Preparation of pentachloronitrobenzene. By Römer and others. 1933-1942. In German.	2.50
9315-9318 PB L 70256	Preparation of phenylhydrazine-4-carboxylic acid. By Fischer. 1939. In German.	1.50
9319-9320 PB L 70256	Preparation of palm-kernel fatty acid amide. By Mack. 1939. In German.	1.50
9321-9325 and 9339 PB L 70256	Preparation of the addition product anthracene-crotonic acid. By Grom and others. 1940-1941. In German.	1.50
9326-9328 PB L 70256	Preparation of "Resin 3925" (for paper size). By Hermann and Seith. 1940. In German.	1.50
9329-9331 PB L 70256	Preparation of xylene-cresotic acid resin. By Selle. 1942. In German.	1.50
9332 PB L 70256	Preparation of "Paper Size A". By Hermann. 1941. In German.	1.50
9333-9334 PB L 70256	Preparation of "Paper Size C". By Hermann and Selle. 1940-1941. In German.	1.50
9335-9338 PB L 70256	Preparation of "Paper Size B". By Wild and Hermann. 1941-1942. In German.	1.50
9339 PB L 70256	See frames 9321-9325.	
9340-9343 PB L 70256	Preliminary instructions for the preparation of "Patentblau V Leukosäure". By Koehrke. 1940. In German.	1.50
9344-9346 PB L 70256	Preliminary instruction for the preparation of "Permanentrot RLT". By Funke. 1940. In German.	1.50
9347-9348 PB L 70256	Preparation of propionyl chloride. By Hermann. 1940. In German.	1.50
9349-9354 PB L 70256	Preparation of "Pigmentechtgelb 45749". By Funke. 1939. In German.	1.50
9355-9380 and 9888 PB L 70256	Preparation of "Pangelb Neu". By Klemm. 1938-1939. In German.	1.50
9381-9382 PB L 70256	Preparation of p-phenol sulfonic acid (in solution). By Knoll. In German.	1.50
9383 PB L 70256	Preparation of phenylglycine. By Fischer. 1941. In German.	1.50
9384-9387 PB L 70256	Preparation of polyacrylic hydroxy ethylamide. By Klau. 1941-1942. In German.	1.50
9388 PB L 70256	Pyromellitic acid. By Horn. Date unknown. In German.	1.50
9389-9395 PB L 70256	Preparation of 1,4-butane-bis-chlorocarbonic ester and of polyurethane. By Lassmann and Wagner. 1941-1942. In German.	1.50
9396 PB L 70256	Preparation of "Hostanid 10/90" (polyurethane). By Wagner. 1942. In German.	1.50
9397-9398 PB L 70256	Preparation of chlorocarbonic esters from diols without cooling with solid carbon dioxide. By Wagner. 1944.	1.50
9399-9400 PB L 70256	Instructions for the preparation of finishing products "Hoe 145". By Balle. 1942-1943. In German.	1.50

9401-9405 PB L 70256 — Preparation of propane sulfanilide. By Platz. 1941. In German. 1.50

9406-9407 PB L 70256 — Recrystallization of "T-Pyrazolon 100%". By Bäuerlein. 1941. In German. 1.50

9408-9413 PB L 70256 — Preparation of 4,4'-diamino diphenyl-methane. By Deresser and Hermann. 1929-1941. In German. 1.50

9414-9416 PB L 70256 — Preparation of 4,4'-diisocyano-diphenyl-methane. By Bastian. 1941. In German. 1.50

9417-9425 PB L 70256 — Instructions for the preparation of a mixture of isocyanates for the hydrophobing agent fast to fulling. Instruction for preparing "Hoe-Lu 1/107". By Bastian. 1941-1943. In German. 1.50

9426-9451 PB L 70256 — Instructions for the preparation of hydrophobing agent "Hoe 1/92" ("Persistol KF"). By Wagner. 1940-1941. In German. 3.00

9452-9466 PB L 70256 — Instructions for the preparation of octadecylisocyanate and "Persistol VS". By Bastian and Deresser. 1940-1941. In German. 1.50

9467-9468 PB L 70256 — "Pigmentgelb 5819". By Kühn. 1942. In German. 1.50

9469-9470 PB L 70256 — Instructions for the preparation of phenylethylene urea. By Heyne. 1943. In German. 1.50

9471 PB L 70256 — Preparation of "Präparationsmittel Hoe 1/131". By Lampert. 1944. In German. 1.50

9472-9476 PB L 70256 — Instructions for the preparation of "Säure E" (Nepasinsulfamidoessigsäure techn.") from "Säure H" by removal of "Nepasin". Preparation of product H6 E. By Balle and Reuter. 1942-1944. In German. 1.50

9477-9478 PB L 70256 — Inter-office letter. 1943. By Frank. In German. 1.50

9479-9485 and 9489 PB L 70256 — Preparation of "Pinakryptolgrün" and its preliminary products. By Grom and Seib. 1936-1939. In German. 1.50

9486-9488 and 9490 PB L 70256 — "Pinakryptolgrün" (iso-phenosafranine-1,3-diaminophenyl phenazonium chloride. 1943. In German. 1.50

9491-9494 PB L 70256 — List of chemical preparations without additional data. n. d. In German. 1.50

9495 PB L 70256 — Inter-office letter. By Privinsky. 1938. In German. 1.50

9496-9499 PB L 70256 — Procedure for preparing safranine base. By Hess. 1931-1934. In German. 1.50

9500-9506 PB L 70256 — Instructions for the preparation of "Spritechtgrün G". By Bäuerlein. 1934. In German. 1.50

9507-9509 PB L 70256 — "Solidogen A". 1934. In German. 1.50

9510-9520 PB L 70256 — Instructions for the preparation of sulfazine. 1938. In German. 1.50

9521-9529 PB L 70256 — Preparation of "Seidengrün P 104". By Hilpert and others. 1935. In German. 1.50

9530-9532 PB L 70256 — Instructions for the preparation of "S salt". By Wolfram and Schnurr. 1936. In German. 1.50

9533-9593 PB L 70256 — Instructions for the production of "Supralichtgelb GGL". By Meissner and others. 1933-1936. In German. 6.50

9594-9605 PB L 70256 — Instructions for the preparation of "Siriuslichtblau FFRL". By Greune and Thiele. 1935-1937. In German. 1.50

9606-9626 PB L 70256 — Directions for the production of "Siriuslichtblau FF2GL". By Brunner and others. 1935-1942. In German. 2.50

9627-9666 PB L 70256 — Directions for the production of "Siriuslichtblau BG" (latter named "Siriuslichtblau FFB"). By Thiers and others. 1936-1942. In German. 4.00

9667-9700 PB L 70256 — Instructions for the preparation of "Siriuslichtblau F3GL" (originally named "Siriuslichtblau 49239 Hoe"). By Langbein and others. 1933-1937. In German. 3.50

9701-9741 PB L 70256 — Instructions for the preparation of fluoro oxazine sulfonic acid ("Siriuslichtviolett FFR", later named "Siriuslichtviolett FRL"). By Langbein. 1934-1943. In German. 4.50

9742-9782 and 9785-9795 PB L 70256 — Instructions for the preparation of "Siriuslichtviolett F3BL", originally named "Siriuslichtviolett F3B". By Maennchen. 1933-1943. In German. 5.50

9783-9784 PB L 70256 — Instructions for the preparation of naphthoxazine sulfonic acid ("Siriuslichtrotviolett F3B"). By Langbein. 1934. In German. 1.50

9796-9802 PB L 70256 — Preliminary instructions for the preparation of carboxazine and carboxazine sulfonic acid ("Siriuslichtblau F3RL"). By Maennchen and Ebert. 1934-1936. In German. 1.50

9803-9821 PB L 70256 — Instructions for the preparation of 2-methylbenzoselenazole. 1933-1941. In German. 2.00

9822-9837 PB L 70256 — Instructions for the preparation of 2-methyl-5-methoxy-benzoselenazole. By Engelbrecht and Schindhelm. 1933-1944. In German. 2.00

9838-9919 PB L 70256 — Instructions for the preparation of 2,5,6-trimethyl benzoselenazole. By Hermann and others. 1935-1940. In German. 8.50

9920-9922 PB L 70256 — Instructions for the preparation of an extinguishing powder ("Sigantal"). By Daimler. 1939. In German. 1.50

9923-9924 PB L 70256 — Preparation of soap from residues of gland extraction in the Hormone Plant CH 23. By Pape. 1940. In German. 1.50

9925-9931 PB L 70256 — Pigment for "Spinngelb RV", paste 15%. By Funke. 1940. In German. 1.50

9932-9934 PB L 70256 — Working up selenium waste liquors. n. d. In German. 1.50

9935-9937 PB L 70256 — Acidifying agent for concrete. By Witz and Wild. 1941. In German. 1.50

9938 PB L 70256 — Preparation of purified "SG residue". By Pensel. 1944. In German. 1.50

9939-9940 PB L 70256 — Preparation of "Spinnbraun" for "SRV". By Funke. 1943. In German. 1.50

9941-9947 PB L 70256 — Instructions for the preparation of "P. Braun B" ("Spinnbraun B"). By Funke. 1942-1943. In German. 1.50

9948-9949 PB L 70256 — Instructions for the preparation of a condensation product from sulfonamide and urea. By Paquin. 1943. In German. 1.50

9950-9955 PB L 70256 — Production of saccharine. 1946. In German. 1.50

Miscellaneous Chemicals (contd)

9956-9958 PB L 70256 — List of chemical preparations without additional data. Date unknown. In German. 1.50

9959-9963 PB L 70256 — Instructions for the preparation of monohydroxy propyl polyethylene diamine ureide. By Paquin and Hesse. 1935-1936. In German. 1.50

9964-9966 PB L 70256 — Instructions for the preparation of sulfite waste liquor ureide. By Paquin. 1937. In German. 1.50

9967-9972 PB L 70256 — Instructions for the preparation of monohydroxy propylurea ureide. By Paquin. 1937. In German. 1.50

9973-9974 PB L 70256 — Instructions for the preparations of "Universal reinigungsmittel T"(a detergent). By Daimler. 1937. In German. 1.50

9975-9979 PB L 70256 — Instructions for the preparation of "Toluidinblau". By Grom. 1938. In German. 1.50

9980-9999 PB L 70256 — Instructions for the preparation of "Tutogen, Neu I". By Bäuerlein and others. 1933-1937. In German. 2.00

1-4 PB L 70256 — Preparation of a "Tutogen" with an increased resistance to frost ("Tutogen 20"). By Daimler and others. 1935. In German. 1.50

5-8 PB L 70256 — Preparation of "Tutogen OS". By Bäuerlein. 1935. In German. 1.50

PB L 70256. I. G. FARBENINDUSTRIE A. G., FRANKFURT-HÖCHST, GERMANY. Instructions for the preparation of dye intermediates and other organic substances. (FIAT Microfilm Reel A-34, Frames 9195-9999 and 1-8, abstract cards). 1929-1944. 84 p. Price: Microfilm-$2.00 - Photostat-$6.00

These are abstracts of the items on reel A 34 (PB L 70256) described above. They were prepared by FIAT abstracters in Germany.

PB L 70257. I. G. FARBENINDUSTRIE A.G., FRANKFURT-HÖCHST, GERMANY. Instructions on the preparation of dyes and other organic substances. (FIAT Microfilm Reel A 35, Frames 9-765) 1925-1946. 756 f. Price: Microfilm-$6.00 - Enlargement Print-$76.00

This FIAT microfilm reel consists of 103 items in the field of organic chemistry. Individual items are listed below and will be available as enlargement prints only; the entire reel may be purchased in microfilm form for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

Frames	Title	Price
9-17 PB L 70257	Preparation of "Tutogen V" (foam-forming fire extinguishers for the use of sea-water). By Riedelsberger, Thiel, Steindorf and Bäuerlein. 1935. In German.	$1.50
18-43 PB L 70257	Preparation of "Tutogen NK III" (non-corroding foam-forming fire extinguishers). By Daimler and Bäuerlein. 1937-1938. In German.	3.00
44-73 PB L 70257	Testing methods for foam-forming fire extinguishers of the "Tutogen" type. By Riedelsberger, Daimler, Paquin and Kibs. 1935-1939. In German.	3.00
74-78 PB L 70257	Preparation of tris-(beta-benzoyl-ethyl)-amine hydrochloride. By Weihe. 1935. In German.	1.50
79-82 PB L 70257	Preparation of 1,3,5-trichlorobenzene from 1,2,4-trichlorobenzene. By Popp, Corell and Eichler. 1936-1938. In German.	1.50
83-86 PB L 70257	Preparation of 1,2,4-trichloro-3,5-dinitrobenzene from 1,2,4-trichlorobenzene. By Pfaff and Erlenbach. 1935-1937. In German.	1.50
87-91 PB L 70257	Preparation of beta-naphthyl-thioglycolic acid. 1935. In German.	1.50
92-122 PB L 70257	Preparation of phenothiazine and of the bacteriological dye thionine. By Grom, Hoffmann, Koch, Wild and Bach. 1938-1942. In German.	3.50
123-139 PB L 70257	Preparation of formyl-methyl-anilins. By Grom. 1939. In German.	2.00
140-153 PB L 70257	Preparation of 5-chloro-tolyl-thioglycolic acid. By Marschall and others. 1938-1939. In German.	1.50
154-157 PB L 70257	Preparation of crude di-n-propyl-naphthalene-beta-sulfonic acid ("Tutogensäure"). By Daimler and Hermann. 1939. In German.	1.50
158-175 PB L 70257	Preparation of foam-forming fire extinguishers ("Tutogen N", "Extra", "E" and "XX"). By Daimler and others. 1937-1938. In German.	2.00
176-178 PB L 70257	Preparation of m-toluic chloride from m-xylene. By Schlichenmaier. 1939. In German.	1.50
179-181 PB L 70257	Preparation of 1,3,1'-tetranitro-6,6'-methylene-dicarbazole. By Deresser. 1941. In German.	1.50
182-183 PB L 70257	Preparation of trichloroaniline from aniline. By Moog. 1941. In German.	1.50
184 PB L 70257	Preparation of 2,4,6-trichloro-1,3,5-trichlorobenzene. By Moog. 1941. In German.	1.50
185-187 PB L 70257	Preparation of 2,4,6-trichlorobenzene. By Moog. 1941. In German.	1.50
188-193 PB L 70257	Preparation of the sulfochlorides of tetralin (1,2,3,4-tetrahydronaphthalene), diethylbenzene and cymene. By Keller. 1941. In German.	1.50
194-208A PB L 70257	Preparation of benzanilide and N-chloro-benzoic-2',4'-dichlor-anilide. By Schumacher and Wild. 1941-1942. In German.	1.50
209-214 PB L 70257	Preparation of benzenesulfanilide and N-chloro-benzenesulfonic 2',4'-dichloranilide. By Schumacher. 1942. In German.	1.50
215-216 PB L 70257	Preparation of thiopropionanilide. 1939-1943. In German.	1.50
217-245 PB L 70257	Preparation of trichloroacetonitrile: description of equipment and calculation of yields. By Wild and others. 1940. In German.	3.00
246 PB L 70257	Separation of the hydrochloride of 2,4,6-triamino-m-xylene. By Thiele. 1944. In German.	1.50
247-257 PB L 70257	Preparation of 2-amino-5,6-dimethyl-benzothiazole. By Frank and Fischer. 1935-1938. In German.	1.50

258 PB L 70257 — Preparation of 3,4-dimethyl-phenyl-1-thiourea. By Fischer, 1937. In German. 1.50

259 PB L 70257 — Preparation of 5-mercapto-4-acetylamino-1,2-xylene. By Fischer. 1939. In German. 1.50

260-262 PB L 70257 — Preparation of 2,5,6-trimethyl-benzothiazole. By Berlin. 1940. In German. 1.50

263-264 PB L 70257 — Preparation of thioacetanilide. 1939. In German. 1.50

265-266 PB L 70257 — Preparation of 2,4,5,7-tetranitro-acridone from diphenylamine-2-carboxylic acid. By Langbein. 1942. In German. 1.50

267 PB L 70257 — Preparation of 2,4,6-trinitro-N-ethyl-aniline. By Müller. 1944. In German. 1.50

268-271 PB L 70257 — Purification of tartrazine. By Gmelin. 1946. In German. 1.50

273-274 PB L 70257 — Hydroxyethylation of stearylamine. By Erlenbach. 1937. In German. 1.50

275-277 PB L 70257 — Preparation of dibromostearic acid. By Platz. 1934. In German. 1.50

278-279 PB L 70257 — Preparation of N,N-diethyl-stearamide. 1937. In German. 1.50

280-282 PB L 70257 — Recrystallization of stearic acid. By Wild. 1948. In German. 1.50

283 PB L 70257 — Preparation of Sulfur Black paste. 1934. In German. 1.50

284 PB L 70257 — Sulfate of "Schwarzbraun". 1934. In German. 1.50

285 PB L 70257 — Working up spent oils. 1937. In German. 1.50

286-290 PB L 70257 — Preparation of the lubricants, "Hoe 154" and "Hoe 155". By Langbein I. 1937-1939. In German. 1.50

291-293 PB L 70257 — Preparation of very pure crystallized sulfur. 1939. In German. 1.50

294-296 PB L 70257 — Preparation of a sheep dip. By Hermann and others. 1941. In German. 1.50

297-306 PB L 70257 — Preparation of "Schablonenlack N" ("Hoe 1/95 A"). By Vestelberger and Hess. 1940-1944. In German. 1.50

307-311 PB L 70257 — Preparation of "Zeponechtviolett C R R". By Müller. 1935. In German. 1.50

312-315 PB L 70257 — Preparation of xylenol polyglycol ether. By Bolle and Riedelmaier. 1934-1935. In German. 1.50

316-317 PB L 70257 — Preparation of xylylene chloride. 1934. In German. 1.50

318-334 PB L 70257 — Preparation of xylyl-xylene. By Schaal and Marschall. 1943-1944. In German. 1.50

335 PB L 70257 — Mixing ratio of alkali silicates. 1937. In German. 1.50

336-343 Pa L 70257 — Preparation of game repelling agents. By Platz. 1930-1938. In German. 1.50

344-346 PB L 70257 — Treatment of wool with naphthalene. By v. Klenck. 1935. In German. 1.50

347-355 PB L 70257 — Preparation of "Hoe 136" and "Hoe 139" (polyoxyethylene compound of p-isooctyl phenol). By Bolle and other. In German. 1.50

356-362 PB L 70257 — Preparation of "Hoe 140" (polyoxyethylene compound of p-dodecylphenol). By Bolle and others. 1936. In German. 1.50

363-364 PB L 70257 — Application of the Wacker method to the preliminary product, "Hoe 163". By Bolle. 1937. In German. 1.50

365-373 PB L 70257 — Preparation of ω-chloroacetophenone, mol. wt. 154.5. By Kleene and others. 1934-1937. In German. 1.50

374-415 PB L 70257 — Preparation of 1-methyl-3-phenylindole and conversion of this compound to 1-methyl-2-phenylindole. By Beniers and others. 1934-1938. In German. 4.50

416-428 PB L 70257 — Preparation of 4,4'-dichlorobenzophenone chloride and purification of dichlorobenzophenone. By Wolff and others. 1934-1937. In German. 1.50

429-456 PB L 70257 — Preparation of "Wollechtblau FBL". By Wolff and others. 1934-1937. In German. 3.00

459-462 PB L 70257 — Preparation of 3,4-dichloroacetophenone. By Beniers and Moehrke. 1934-1936. In German. 1.50

463-476 PB L 70257 — Preparation of N-isobutyl-beta-(p-chloro phenyl)-4,6-dimethylindole and rearrangement of this compound into the alpha compound. By Beniers and Hager. 1935-1936. In German. 1.50

477-492 PB L 70257 — Preparation of "Wollechtblau FGL" (52453). By Hager and others. 1935-1937. In German. 2.00

493-585 PB L 70257 — Preparation of "Wollechtviolett FB". By Beniers and others. 1938-1939. In German. 9.50

586-589 PB L 70257 — Production of wool grease. By Haakh and Hermann. 1940. In German. 1.50

590-610 PB L 70257 — Preparation of "Wollechtgrün FG" and "82069". By Beniers. 1938-1940. In German. 2.50

611-612 PB L 70257 — Preparation of the plasticizer "DU" (1,4-butylene-bis-[di-n-butyl-urethane]). By Müller. 1941. In German. 1.50

613-616 PB L 70257 — Preparation of the plasticizer "HA". By Paquin and Koch. 1942. In German. 1.50

617-618 PB L 70257 — Preparation of priming paints. By Thorn. 1936. In German. 1.50

619-621 PB L 70257 — Preparation of the intermediate "H. r. 1635" (condensation product from lepidinealdehyde and allylrhodanine). By Beniers. 1940. In German. 1.50

622-624 PB L 70257 — Preparation of 2,5,6-trimethyl-benzoxazole. By Beniers. 1940. In German. 1.50

625-636 PB L 70257 — Preparation of 2,5,6-trimethyl-benzoselenazole. By Hermann and Wild. 1940. In German. 1.50

637-639 PB L 70257 — Preparation of phenyltetrahydro quinolylformamidine ("Tetramidine"). By Fischer. 1940. In German. 1.50

640 PB L 70257 — Preparation of 1,3,3,5-tetramethyl-indoline-alpha-methylene-omega-

aldehyde. By Fischer. 1945. In German. 1.50

641-643 PB L 70257 — Preparation of beta-tetrahydronaphthyl-thiourea. By Fischer. 1946. In German. 1.50

644-646 PB L 70257 — Preparation of stearoyl acetic ester. By Hermann and Wild. 1940. In German. 1.50

647 PB L 70257 — Recrystallization of stearic acid. By Wild. 1945. In German. 1.50

648-650 PB L 70257 — Preparation of S-ethyl-isothio-propionanilide ("Propionol"). 1940. In German. 1.50

651-653 PB L 70257 — Preparation of the dipotassium salt of "Pangelb" (condensation product from hydroxythionaphthene carboxylic acid and benzaldehyde disulfonic acid). By Wild. 1940. In German. 1.50

654 PB L 70257 — Preparation of the hydrochloride of phenylhydrazine-4-carboxylic acid. By Fischer. 1945. In German. 1.50

655 PB L 70257 — Preparation of "Pinakryptolgrün". 1944. In German. 1.50

656-658 PB L 70257 — Preparation of "Patentblau Pina". By Fischer. 1946. In German. 1.50

659-660 PB L 70257 — Preparation of the ethylester of ortho-propionic acid. 1940. In German. 1.50

661-662 PB L 70257 — Preparation of the triethylester of ortho-acetic acid. 1946. In German. 1.50

663 PB L 70257 — Preparation of "Naphtholgrün". Iron complex of nitroso-1,4-naphthol-sulfonic acid. By Wild. 1946. In German. 1.50

664-666 PB L 70257 — Preparation of 4-methoxybenzoyl acetic ester (p-anisoylacetic ester). 1943. In German. 1.50

667 PB L 70257 — Preparation of 2-methyl-5-methoxy-5-methylmercapto-benzothiazole. 1946. In German. 1.50

668 PB L 70257 — Preparation of 4-methyl-quinoline from 2-chloro-4-methyl-quinoline). 1945. In German. 1.50

669-671 PB L 70257 — Preparation of 2-methylpyrroline. By Becker. 1946. In German. 1.50

672-677 PB L 70257 — Preparation of lepidine and N-ethyl-lepidine-omega-aldehyde. By Fischer. 1940. In German. 1.50

678-681 PB L 70257 — Preparation of "Lack OK" from p-cresol-dialcohol and p-hydroxy-benzoic acid. By Wild. 1940. In German. 1.50

682-686 PB L 70257 — Preparation of "Komponente Koe 302", a condensation product from octadecylene succinic anhydride and p-cyano acetyl-aniline. 1943. In German. 1.50

687-690 PB L 70257 — Preparation of phenyl hydrazine-Z-methane sulfonic acid. By Wild. 1940. In German. 1.50

691-692 PB L 70257 — Preparation of 1-(Z'-methylsulfonphenyl)-3-heptadecyl-5-pyrazolone ("Komponente Z 120"). By Wild. 1940. In German. 1.50

693-696 PB L 70257 — Preparation of 1-(4'-phenoxy-3'-sulfophenyl)-3-heptadecyl-5-pyrazolone ("Komponente Z 169"). By Wild and Fischer. 1943-1944. In German. 1.50

697-698 PB L 70257 — Preparation of "Komplementrot D" (azo dye). 1946. In German. 1.50

699-700 PB L 70257 — Preparation of p-anisoylacetic ester. 1941. In German. 1.50

701-703 PB L 70257 — Preparation of "Komponente Te 521". By Fischer. 1945. In German. 1.50

704-706 PB L 70257 — Preparation of the dye "S 447" (iodine salt of the condensation product from 1-ethyl-2-methyl-4,5-diphenylthiazole, ethyl-selenorhodanine and 1-ethyl-2,5,6-trimethyl-benzothiazole). By Schacke. 1940. In German. 1.50

707-709 PB L 70257 — Preparation of the dye, "R 632" (benzaurin). By Streeck. 1939. In German. 1.50

710 PB L 70257 — Preparation of formanilide. 1946. In German. 1.50

711-718 PB L 70257 — Preparation of "Filterblaugrün", soluble in spirit and in water. 1945. In German. 1.50

719-720 PB L 70257 — Preparation of sodium benzothiazole-2,5-disulfonate. 1943. In German. 1.50

721-724 PB L 70257 — Preparation of 2-methyl-5-phenyl-benzoxazole ("R. B. 340 Base"). By Wild and Fischer. 1940-1945. In German. 1.50

725-727 PB L 70257 — Preparation of 2-methyl-5-methoxy-benzoselenazole. By Wild. 1940. In German. 1.50

728-730 PB L 70257 — "S 106 Base" (2-methyl-5',6',7',8'-tetrahydronaphthol-1',2',4,5-thiazole). By Fischer. 1940. In German. 1.50

731-734 PB L 70257 — Preparation of 2-methyl-benzoselenazole. 1940. In German. 1.50

735-737 PB L 70257 — Preparation of 2,5,6-trimethyl-benzothiazole ("S 165 Base"). 1940. In German. 1.50

738 PB L 70257 — Preparation of benzimidazole. 1946. In German. 1.50

739 PB L 70257 — "Bengal Rose", soluble in spirit. 1946. In German. 1.50

740-742 PB L 70257 — Preparation of 2-methyl-5,6-diethoxy-benzothiazole ("Base S 149"). 1946. In German. 1.50

743-745 PB L 70257 — Preparation of N-ethyl selenorhodanine. 1940. In German. 1.50

746-747 PB L 70257 — Preparation of S-ethyl-isothioacetanilide ("Acetil"). 1940. In German. 1.50

748-751 PB L 70257 — Preparation of N-ethyl-6-methyl-thioquinolone. By Wild. 1940. In German. 1.50

752-753 PB L 70257 — Preparation of N-ethyl-6-methyl-thioquinolone. By Wild. 1940. In German. 1.50

754-756 PB L 70257 — Preparation of 6-ethoxy-2-methyl-benzothiazole. 1946. In German. 1.50

757-765 PB L 70257 — Survey of the starting materials used in preparing the substances described in this reel. In German. 1.50

PB L 70257-S. I. G. FARBENINDUSTRIE A.G., FRANKFURT-HOCHST, GERMANY. Instructions on the preparation of dyes and other organic substances. (FIAT Microfilm Reel A-35, Frames 9-765, abstract cards) 1925-1946. 140 p. Price: Microfilm-$3.00 - Photostat-$10.00
These are abstracts of the items on reel A 35 (PB 70257) described above. They were prepared by FIAT abstracters in Germany.

PB L 70493. I. G. FARBENINDUSTRIE A. G., GRIESHEIM, GERMANY. A collection of technical reports on organic chemicals. (FIAT Microfilm Reel R 17, Frames 4485-5470). 1934-1944. 985 F. Price: Microfilm-$6.00 - Enlargement Print-$98.50
This FIAT microfilm reel consists of 86 reports which chiefly deal with fuels, soaps, oils, etc. Individual items are listed below and will be available as enlargement prints only; the entire reel may be purchased in microfilm form for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

Frames	Title	Price
4485-4531 PB L 70493	Procedure and evaluation of the Oppau method for determining octane numbers. By Singer. 1942. In German.	$5.00
4532-4567 PB L 70493	Thermotechnical examinations in a high pressure plant for the catalytic polymerization of olefinic liquified gases. By Kling. 1943. In German.	4.00
4568-4579 PB L 70493	Investigations on the critical state of a multi-component mixture. By Kling. 1943. In German.	1.50
4580-4589 PB L 70493	Heat insulating substance in combination with fly ashes. By Schenker. 1943. In German.	1.50
4590-4595 PB L 70493	Flow resistance of ammonia catalyst. By Kling. 1941. In German.	1.50
4596-4602 PB L 70493	Heat insulating substances containing fly ashes. By Schenker. 1941. In German.	1.50
4603-4614 PB L 70493	Examinations of insulations from slag wool and glass wadding. By Schenker. 1941. In German.	1.50
4615-4622 PB L 70493	Thermal conductivity of ground fly ashes. By Schenker. 1942. In German.	1.50
4623-4629 PB L 70493	Measurement of the heat transfer in an automobile radiator that is filled with various cooling liquids. By Kling. 1942. In German.	1.50
4630-4637 PB L 70493	Calculation of a high pressure heat exchanger. By Schenker. 1942. In German.	1.50
4638-4640 PB L 70493	Measurement of the thermal conductivity coefficient, specific heat, and heat transfer coefficients of cooling liquids. By de Vries. 1942. In German.	1.50
4641-4645 PB L 70493	Behavior of mineral fibers toward vibrations. By Schenker. 1943. In German.	1.50
4646-4654 PB L 70493	Resistance measurements on butyl catalysts at low pressure. By Kling. 1943. In German.	1.50
4655-4657 PB L 70493	Ignition experiments in a bomb. By Köhler. 1940. In German.	1.50
4658-4661 PB L 70493	Influence of ethylene bromide on the octane number. By Singer. 1942. In German.	1.50
4662-4668 PB L 70493	Use of hydrogen in the combustion engine. By Witschakovsky. 1942. In German.	1.50
4669-4672 PB L 70493	Use of methane as fuel for motor car engines. By Witschakovsky. 1942. In German.	1.50
4673-4676 PB L 70493	Testing the inflammability of charcoal by means of battery currents. By Gluck. 1942. In German.	1.50
4677-4680 PB L 70493	Determinations of the vapor pressure of ethers and hydrocarbons at low temperatures. By Bauer. 1941. In German.	1.50
4681-4685 PB L 70493	Investigations on corrosion of valve steels by lead and lead oxide. By Bauer. 1942. In German.	1.50
4686-4691 PB L 70493	Development of a small capacity gasoline burner. By Thiel. 1942. In German.	1.50
4692-4700 PB L 70493	Gasolines and lubricating oils, and laboratory methods for their testing. By Bauer. 1942. In German.	1.50
4701-4707 PB L 70493	Behavior of the water dissolved in "Otto" fuels at low temperatures. By Seidel. 1942. In German.	1.50
4708-4712 PB L 70493	Detection of carbon tetrachloride in gasolines. By Wilhelmi. 1942. In German.	1.50
4713-4722 PB L 70493	Firing material for prolonged heating of appliances. By Fensing. 1942. In German.	1.50
4723-4729 PB L 70493	Corrosive effect of liquid sodium on various metals. By Pirscher. 1942. In German.	1.50
4730-4738 PB L 70493	Production and effect of colloidal lead in gasoline. By Schuch. 1943. In German.	1.50
4739-4745 PB L 70493	Oppanol as addition agent for automobile winter oils. By Halsler. 1943. In German.	1.50
4746-4752 PB L 70493	Influencing the flow resistance of liquids with high viscosity. By Kling. 1938. In German.	1.50
4753-4757 PB L 70493	The suitability of pinacolone as anti-knock agent for aviation fuels. By Witschakovsky. 1943. In German.	1.50
4758-4762 PB L 70493	Ten-hour endurance test with leaded isooctane in the BMW 132 single cylinder supercharged engine. By Wischakovsky. 1943. In German.	1.50
4763-4770 PB L 70493	Suitability of chemical compounds as agents detrimental to engines. By Lauer. 1943. In German.	1.50

Miscellaneous Chemicals (contd)

4771-4772 PB L 70493 — Influence of chlorine dioxide on the running of a diesel engine. 1943. In German. 1.50

4773-4794 PB L 70493 — Preparation of methyl-ethyl-ketone peroxide. By Roth. 1944. In German. 2.50

4795-4802 PB L 70493 — Anti-knock qualities of glycols and glycol ethers. By Worliczek. 1944. In German. 1.50

4803-4840 PB L 70493 — Catalytic production of hydrocyanic acid from ammonia, methane and air. By Andrunow. 1934. In German. 4.00

4841-4901 PB L 70493 — Conversion of electric arc acetylene gas by the Wacker method. By von Taack-Trakranen. 1934. In German. 6.50

4902-4916 PB L 70493 — The problem of catalysts for the hydration of acetylene to acetaldehyde with active aluminum oxide in the gas phase. By Zobel. 1936. In German. 1.50

4917-4942 PB L 70493 — Zinc titanates as white pigments. By Lederle and Bill. 1936. In German. 3.00

4943-4950 PB L 70493 — Potentiometric determination of cobalt in nickel mattes and ores. By Claasen. 1936. In German. 1.50

4951-4969 PB L 70493 — Investigation regarding the conversion of the hydroxy acids of paraffin oxidation products into unsaturated acids by dry distillation. By Ertel. 1936. In German. 2.00

4970-4994 PB L 70493 — Distillation of the crude acids from the paraffin oxidation by the Wacker and the Lurgi method. By Luther. 1936. In German. 2.50

4995-5000 PB L 70493 — A new oxidative decomposition product of carbohydrates. By Hummel. 1937. In German. 1.50

5001-5016 PB L 70493 — Test results as to the washing and foaming properties of paraffin soaps. By Heinze. 1937. In German. 2.00

5017-5052 PB L 70493 — Explosion limits and flame speeds of hydrocarbon-oxygen mixtures. By Sachsse. 1937. In German. 4.00

5053-5064 PB L 70493 — The refining of aldehydes. By Hodler. 1937. In German. 1.50

5065-5082 PB L 70493 — Reduction of used iron oxide catalysts with hydrogen in a revolving tubular furnace. By Pauckner. 1937. In German. 2.00

5083-5091 PB L 70493 — Determination of the unsaponifiable components of paraffin oxidation products. By Leithe. In German. 1.50

5092-5097 PB L 70493 — Purification of low temperature carbonization tar from lignite, for producing lubricating oils. By Plesch. 1937. In German. 1.50

5098-5133 PB L 70493 — Washing and foaming test on soaps from pure natural and from fractionated paraffin fatty acids. By Heinze. 1937. In German. 4.00

5134-5145 PB L 70493 — Some new apparatus for the automatic organic micro elementary analysis with the aid of synchronous motors. By Grassner. 1937. In German. 1.50

5146-5156 PB L 70493 — Technical experiments for producing olefins in the cracking plant. By Baumeister. 1937. In German. 1.50

5157-5164 PB L 70493 — Heat of combustion of butyl chlorides. By Schlüter. 1937. In German. 1.50

5165-5170 PB L 70493 — A new distilling apparatus. By Weiss. 1937. In German. 1.50

5171-5245 PB L 70493 — Experiments for studying the course of the washing process during a certain time by means of repeated turbidity determinations in the washing liquid. By Dürr. 1937. In German. 7.50

5246-5254 PB L 70493 — Suitability of Fischer gas oil for the production of detergents (alcohol sulfonates). By Berger. 1937. In German. 1.50

5255-5259 PB L 70493 — The reaction of acetaldehyde and crotonaldehyde with hydrogen sulfide. By Nienburg. 1938. In German. 1.50

5260-5295 PB L 70493 — Chemical decomposition of peats, beech and spruce wood. By Bohm. 1937. In German. 4.00

5296-5310 PB L 70493 — The equilibrium in the system, "Mondmatte" + carbon monoxide nickel carbonyl + residue. By Staeger. 1937. In German. 1.50

5311-5314 PB L 70493 — Formation of nickel carbonyl from powder mixtures (Checking of the British Patent No. 429 274). By Staeger. 1937. In German. 1.50

5315-5349 PB L 70493 — The chemical composition of extract obtained from lignite by Pott's method. By Stade. In German. 3.50

5350-5369 PB L 70493 — Technical experiments for the evaporation of the unsaponifiable substance from oxidized crude scale wax. By Harder. In German. 2.00

5370-5403 PB L 70493 — Use of thiocyanogen compounds as inhibitors for pickling acids. By Chorbacher. 1934. In German. 3.50

5404-5408 PB L 70493 — Experiments regarding the speed with which various calcium alloys absorb nitrogen. By Metzger. 1938. In German. 1.50

5409-5431 PB L 70493 — The suitability of crude scale wax, Rhodesia and Pennsylvania gas oils for the production of sulfonates from the hydrogenated total oxidation product. By Berger and Schiller. 1937. In German. 2.50

5432-5470 PB L 70493 — Purpose and principle of the ultra-violet dosimeter. By Frankenburger. 1938. In German. 4.00

PB L 70493-S. I. G. FARBENINDUSTRIE A. G., GRIESHEIM, GERMANY. A collection of technical reports on organic chemicals. (FIAT Microfilm Reel R 17, Frames 4485-5470, abstract cards.) 1934-1944. 67 P. Price: Microfilm-$2.00 - Photostat-$5.00
These are abstracts of the items on reel R 17 (PB 70493) described above. They were prepared by FIAT abstracters in Germany.

PB L 73531. I. G. FARBENINDUSTRIE A. G., RHEINFELDEN, GERMANY. A collection of reports on various chemicals. (FIAT Microfilm Reel M 88, Frames 1-128.) 1945-1946. 128 P. Price: Microfilm-$2.25 - Enlargement Print-$13.00
This FIAT microfilm reel consists of 12 items in the field of chemical technology. Individual items are listed below and will be available as enlargement prints only; the entire reel may be purchased in microfilm form for $2.25. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

Miscellaneous Chemicals (contd)

Frames	Title	Price
1-39 PB L 73531	Production of hydrochloric acid. 1945. In German.	$4.00
40-70 PB L 73531	Production of silicon tetrachloride. By Kenschler. 1946. In German.	3.50
71-75A PB L 73531	Production of acetylene, including purification and drying. 1945. In German.	1.50
76-79 PB L 73531	Production of tetrachloroethane. 1945. In German.	1.50
80-84 PB L 73531	Production of trichloroethylene from tetrachloroethane. 1945. In German.	1.50
85-88A PB L 73531	Production of pentachloroethane and perchloroethylene from dichloroethylene and chlorine. 1945. In German.	1.50
89-92 PB L 73531	Production of hexachloroethane from perchloroethylene and chlorine. 1945. In German.	1.50
93-96 PB L 73531	Production of dichloroethylene from acetylene and chlorine. 1945. In German.	1.50
97-108A PB L 73531	Production of vinyl chloride from acetylene and hydrogen chloride. 1945. In German.	1.50
109-120 PB L 73531	Chlorination of polyvinyl chloride. By Ballabany. 1945-1946. In German.	1.50
121-122 PB L 73531	Production of polyvinyl chloride ("Igelit PCU"). By Ballabany. 1945. In German.	1.50
123-128 PB L 73531	Treatment of chlorine obtained by electrolysis. By Hermann. 1946. In German.	1.50

PB L 73531-S. I. G. FARBENINDUSTRIE A. G., RHEINFELDEN, GERMANY. A collection of reports on various chemicals. (FIAT Microfilm Reel M 88, Frames 1-128, abstract cards). 1945-1946. 12 p. Price: Microfilm-$1.00 - Photostat-$1.00
These are abstracts of the items on reel M 88 (PB 73531) described above. They were prepared by FIAT abstractors in Germany.

*PB L 78277. KAMMERMEYER, K. and CARPENTER, G. B. Alcohols by hydration of olefins. (FIAT Final Rept 968). Apr 1947. 38 p. Price: Mimeo-$1.00
Research and small scale semi-plant work on hydration of olefins, primarily of propylene, is presented. Catalyst preparation is described in detail. Plans for commercial development and the patent situation are discussed. The hydration of propylene over a fixed bed catalyst containing 20% of tungsten, as metal, and 5% of zinc oxide was carried through the development stage. The pressure used was 200 atmospheres and the temperature of operation was 220 to 250° C. It appears that conversions on a once-through basis were 50% and yields based on propylene were in excess of 95%. Solutions containing up to 20% of isopropyl alcohol (100% basis) were obtained. Insufficient experimental work was carried out to warrant conclusions in regard to hydration of ethylene and olefins higher than propylene. Two flowdiagrams and a diagram of a high pressure converter are presented. The report includes a patent claim (in German) by Dr. W. Reppe concerning this subject.

*PB L 78653. KRIEBLE, R. H. and HOLMES, J. B. Formaldehyde manufacture in the I.G. Farbenindustrie. (FIAT Final Rept 999). Apr 1947. 15 p. Price: Mimeo-$0.25
Formaldehyde is manufactured in the Leverkusen, Ludwigshafen and Schkopau plants of I.G. Farbenindustrie A.G., by the catalytic dehydrogenation of methanol. An electrolytically refined silver catalyst is used. By this process 94 percent of the methanol reacts per pass leaving about 1.5 percent methanol in the final 30 percent solution of formaldehyde. No distillation of the final product is required. The yield of formaldehyde, based on methanol is 82.5 percent of theory. No heat is recovered from the converters at the Leverkusen plant, but at the Ludwigshafen plant sufficient heat is recovered in the form of low pressure steam to run the methanol evaporators. A flowsheet and a specifications sheet for methanol are included.

*PB L 78280. KUNZE, WALTER G. The manufacture of dextrines and cold water dispersible starches in Germany. (FIAT Final Rept 1057). Apr 1947. 15 p. Price: Mimeo-$0.50
This report refers to the manufacture in Germany of adhesives derived from starch. It covers the fabrication processes of dextrines and cold water dispersible starches, the type of machinery used, and the compounding of the resulting products into industrial adhesives.

PB L 78603. LANNING, W. C. and MILLER, R. R. Oxygen source material, properties and reactions of the alkali oxides. Ninth partial report. (Nav Res Lab Rept P-1701). Feb 1941. 18 p. Price: Microfilm-$1.00 - Photostat-$2.00
This report discusses important chemical and physical properties of potassium tetroxide and mixed potassium tetroxide-sodium peroxide in relation to their applications as oxygen sources and carbon dioxide absorbents. Tables and graphs are included.

PB L 78743. LEIBIGER, O. W. (tr.). Preparation of "alkazid" M and DIK. (AAF T-2 Translation 771). Oct 1946. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
Alkazid M and Alkazid DIK are trade names for alkaline agents used to remove carbon dioxide and hydrogen sulfide from manufactured gases, either coke-oven gases or water gas. The M product will absorb hydrogen sulfide or carbon dixode; the DIK product is used primarily for hydrogen sulfide removal after carbon dioxide has been removed. These alkaline agents are complex condensation products of aldehydes with alkylamines and hydrocyanic acid. The M compound is synthesized from acetaldehyde and methylanine, the DIK compound from formaldehyde and dimethylamine. The preparation of the alkazids is reviewed briefly. Operating instructions are given for the preparation of the M compound (potassium N-methyl alanine). The information was obtained during the interrogation of Dr. Pfannmueller, of I.G. Ludwigshafen on May 28, 1945.

*PB L 78270. MAJOR, COLEMAN J. Manufacture of isododecylphenol by I. G. Farbenindustrie A. G., Uerdingen. (FIAT Final Rept 1039). Mar 1947. 11 p. Price: Mimeo-$0.50
Isodecylene and phenol are reacted in the presence of zinc chloride and Tonsil clay at a temperature of 165 to 170° C. to produce crude p-isodecylphenol. The crude product is then distilled under vacuum for the separation of the final product from the unreacted olefin, phenol, and the higher boiling constituents. A flowdiagram is included. Isodecylphenol was used as a plasticizer for Igamid (Nylon).

PB L 78593. MILLER, R. R. Oxygen source compounds, laboratory and canister tests on alkali oxides. Eighth partial report. (Naval Res Lab Rept P-1702). Feb 1941. 74 p. Price: Microfilm-$2.00 - Photostat-$5.00
Oxygen liberation from the higher oxides of potassium and sodium has been studied in the presence of inorganic compounds as catalysts. Laboratory tests have indicated an enhanced rate of liberation by water vapor with some of the catalysts. So-

dium peroxide has been hydrated in the presence of K_2O_4 and the resulting material showed somewhat greater activity in the absorption of CO_2. Breathing tests on canisters of potassium tetroxide show that oxygen liberation and CO_2 absorption take place at rates suitable for breathing purposes. The lowest temperature at which canisters can be used and the life of the canister depend on the size and construction of the apparatus and the amount of activity of the breather. Tables, diagrams and numerous graphs illustrate the text.

*PB L 78983. U. S. FIELD INFORMATION AGENCY, TECHNICAL. Preparation of certain diamines and dinitriles at I.G. Leverkusen. (Tech Bulletin T-14). Mar 1947. 3 p. Price: Mimeo-$0.25

A description is given of laboratory procedures for the preparation of (1) tetramethylenediamine, (2) N-methyl-di (aminopropyl) amine, (3) bis-(aminopropyl)-1,4-butanediol ether, and (4) dihydromuconic dinitrile.

* PB L 77684. U. S. FIELD INFORMATION AGENCY TECHNICAL. Propane oxidation in Germany. (Tech Bulletin T-15). Apr 1947. 2 p. Price: Mimeo-$0.25

A brief description is given of the laboratory oxidation of propane in order to produce hydrogen peroxide for rocket fuel. The separation of hydrogen peroxide proved uneconomical.

ELECTRICAL MACHINERY, EQUIPMENT, AND SUPPLIES

Electronics

PB L 80671. CARHART, R. R. Range and travel time of a sound ray in a medium of uniformly varying velocity. (With 9 figures). Nov 1942. 31 p. Price: Microfilm-$1.00-Photostat-$2.00

Simple refraction theory of sound rays is presented in a form convenient for calculations and theoretical work. In a layer with a constant sound velocity gradient the ray is a circle curving down if the velocity decreases with depth and up if it increases with depth. The range and travel time between any two points of the ray are expressed in several equations. A simple and extremely accurate method for approximating the travel time is described and used in a numerical example which compares the various expressions. The approximate arrival-time differences between the direct and surface reflected rays is given for rays of negligible curvature. Variations in surface wave height are sufficient to cause interference between the two rays at usual ranges for frequencies around 25 kc when the source and receiver are near the surface. This report was prepared for the National Defense Research Committee by R. R. Carhart of the Oceanographic Division of the University of California Division of National Defense Research at the U. S. Navy Radio and Sound Laboratory, San Diego, Cal.

PB L 85324-T. THE DENKI GAKKAI (INSTITUTE OF ELECTRICAL ENGINEERS OF JAPAN), TOKYO. Electrotechnical Journal (March 1941, vol. 5, No. 3, 20 p.) 1941. 20 p. Price: Microfilm-$1.25 - Photostat-$2.00

This document is the March 1941 (vol. 5, No. 3, 20 p.) issue of the overseas edition, formerly the abstract section, of the Journal of the Institute of Electrical Engineers of Japan and is published monthly in English at Tokyo. Articles printed in this English language edition have in most cases appeared as originals in Japanese in earlier issues of Denki Gakkai Zasshi (Journal of the Institute of Electrical Engineers of Japan).

PB L 85324 - PB L 85325, PB L 85350 - PB L 85351, PB L 85354. DENKI GAKKAI, TOKYO. Journal of the Institute of Electrical Engineers of Japan. Vol. 60, No. 11, Vol. 61, No. 9, Vol. 62, Nos. 1, 4, Vol. 63, No. 9, Nov 1940, Sep 1941, Jan 1942, Apr 1942, Sep 1943.

PB No.	Volume	Number	Date	Pages	Price Micro.	Photo.
L 85324	60	11	Nov 1940	165	$5.00	$17.00
L 85325	61	9	Sep 1941	119	$3.75	$12.00
L 85350	62	1	Jan 1942	62	$2.50	$ 7.00
L 85351	63	9	Sep 1943	117	$3.75	$12.00
L 85354	62	4	Apr 1942	95	$3.25	$10.00

These documents are issues of a technical periodical published monthly in Japanese by the Denki Gakkai of Tokyo, a nationwide organization of university professors, public and private engineers, representing the electrical engineering profession in Japan. The journal of this institute contains articles on electrical communications, and electro-chemistry, and reports important current developments in the general field of electrical research.

PB L 85330. DENKI HYORONSHA, KYOTO. Electrical Review, Jan-Dec 1941, Vol 29, Nos 1-12. 1941. 839 pp. Price: Microfilm-$7.00 - Photostat-$84.00

This document is a bound volume of one year's issues of a Japanese technical periodical published monthly in Kyoto in Japanese and dealing with the general field of electricity, including articles on electrical devices and machines, electrical communications, electrical heating and illumination, electrical materials, electrical calculations, etc.

PB L 85352 - PB L 85353. DENKI TSŪSHIN GAKKAI, TOKYO. Journal of the Institute of Electrical Communications. Nos. 202-213, 226-237. 1940, 1942.

PB No.	Number	Date	Pages	Price Micro.	Photo.
L 85352	202-213	Jan-Dec 1940	1074	$7.00	$108.00
L 85353	226-237	Jan-Dec 1942	1249	$7.00	$125.00

These documents are bound volumes of a year's issues of a Japanese technical periodical dealing with the general field of electrical communications. They contain articles dealing with the theory of electrical communications as well as discussions on actual technological developments in telephony, radio, television, etc. The Denki Tsūshin Gakkai Zasshi is published monthly in Japanese by the Institute of Electrical Communications of Tokyo.

PB L 85326 - PB L 85327 - PB L 85328 - PB L 85329. NIPPON ONKYOGAKKAI, TOKYO. Journal of the Acoustics Society of Japan. Vol. 4, Nos. 1,7,9,12, Jan, Jul, Sep, Dec 1943.

PB No.	Volume	Number	Date	Pages	Price Micro.	Photo.
L 85326	4	1	Jan 1943	48	$2.00	$5.00
L 85327	4	7	Jul 1943	34	$1.75	$4.00
L 85328	4	9	Sep 1943	26	$1.50	$3.00
L 85329	4	12	Dec 1943	16	$1.25	$2.00

These documents are issues of a Japanese technical periodical published in Japanese each month in Tokyo by the Japanese Acoustics Society. These journals deal with sound and supersonic wave theory and its application in telegraphy, radio, etc.

PB L 80702. RCA MANUFACTURING CO., INC., CAMDEN, N. J. Electronic anti-aircraft fire-control predictor. Apr 1942. 207 p. Price: Microfilm-$5.00 - Photostat-$14.00

This report describes two types of electronic predictors for anti-aircraft fire control, together with the component computing elements used in them. Both predictors are based upon stabilized cartesian coordinates, one making use of numerical computing methods, the other employing continuous variables. Section II outlines the complete design of the numerical predictor. Section III discusses in detail the design and circuits used in the computing elements for the predictor outlined in section II. Section IV deals with electrical predictors employing continuous variables. A list of symbols, diagrams and charts are included.

Generators, Motors, Transmission, Distribution and Allied Equipment

PB L 2003-8. MARX, ERWIN and TRAUPE, WILLY-HANS. Construction and operation of direct-current, high-voltage, large power transmission. (Supplement to PB 2003, vol. 1, p. 114. Report on German progress on high voltage D. C. power transmission, by Otto Jensen. For translation of this supplement, see PB 2003-82) n. d. 64 p. Price: Microfilm-$2.00 - Photostat-$5.00
This report covers the construction and operation of high voltage D. C. power transmission equipment. The advantage of HVDC versus HVAC for transmission of particularly large amounts of electric power over very long distances are explained. The realization of such transmission presented considerable difficulties and to overcome them high-pressure arc valves were developed. Using these valves, a high voltage 80 kv d.c. underground cable transmission system was built between two a.c. generating sources, which permitted transmission of 16000 kw in either direction. The development and experiments preceding the continuous operation of the installation are described. Photographs, etc.

PB L 2003-82. MARX, ERWIN and TRAUPE, WILLY-HANS. Construction and operation of direct-current, high-voltage, large-power transmission. (Supplement to PB 2003, Report on German progress on high voltage DC power transmission, by Otto Jensen. Translation of PB 2003-8). n. d. 53 p. Price: Microfilm-$2.00 - Photostat-$4.00

PB L 2003-83. BUSEMANN, F. High voltage long distance transmission. (Supplement to PB 2003, Report on German progress on high-voltage D.C. power transmission, by Otto Jensen. For translation of this supplement, see PB 2003-84). Sep 1945. 104 p. Price: Microfilm-$3.00 - Photostat-$7.00
See PB 2003-84 for abstract of this report. In German.

PB L 2003-84. BUSEMANN, F. High-voltage, long-distance transmission. (Supplement to PB 2003, Report on German progress on high voltage D.C. power transmission, by Otto Jensen. Translation of PB 2003-83). Sep 1945. 95 p. Price: Microfilm-$2.00 - Photostat-$7.00
This document is an English translation of a German original and deals with high-voltage long-distance transmission both by the common three-phase a-c and the more recent d-c as developed in Germany during the war years. The reasons for the development of HVDCT are discussed in detail. High-voltage transmission d-c equipment is compared with three-phase transmission equipment now in general use. Graphs, diagrams, photographs and tables included. Bibliographical footnotes. For German original see PB 2003-83.

FOOD AND KINDRED PRODUCTS

PB L 80854. HOMES, M. V. Summary of the activities of principal studies and research in agriculture from 1943 to 1946. Oct 1946. 8 p. Price: Microfilm-$1.00 - Photostat-$1.00
This Belgian report is in the French language.

PB L 70508. REICHSARBEITSGEMEINSCHAFT "LANDWIRTSCHAFTLICHE GEWERBEFORSCHUNG," BERLIN. Treatment of preserves and food research. (FIAT Microfilm Reel AA 1, Frames not numbered) 1938-1939. 709 f. Price: Microfilm-$6.00 - Enlargement print-$71.00
This reel prepared by FIAT investigators in Germany consists of volume I (pages 1-746) and of volume II(pages 1-672) of the periodical, "Vorratspflege und Lebensmittelforschung, Berlin." Volume III and volume IV will be found on reel AA 2, PB L 70509. Volume V will be found on reel AA 3, PB L 70510. Individual items are listed below and will be available as enlargement prints. Numbers on frames indicate periodical page numbers only, since two pages appear as a single frame. Please include PB, volume, and page numbers when ordering individual items. In German.

Pages	Title	Price
VI-XIV Vol. 1 PB L 70508	Index. Oct 1937. In German.	$2.00
1-2 Vol. 1 PB L 70508	Introduction. Oct 1937. In German.	1.50
3-12 Vol. 1 PB L 70508	Food economy of the German nation. Oct 1937. In German.	1.50
12-19 Vol. 1 PB L 70508	Storage practice with grain. Oct 1937. In German.	1.50
20-27 Vol. 1 PB L 70508	Preserving meat by refrigeration. Oct 1937. In German.	1.50
28-43 Vol. 1 PB L 70508	Production and storage of curd. Oct 1937. In German.	1.50
44-51 Vol. 1 PB L 70508	Sources of loss in the cold storage of vegetables. 1938. In German.	1.50
52-58 Vol. 1 PB L 70508	Biological syntheses of raw materials. Oct 1937. In German.	1.50
59-63 Vol. 1 PB L 70508	Turnover disposal of food and its spoiling. Oct 1937. In German.	1.50
64-70 Vol. 1 PB L 70508	Changes in the concept of nutrition. Oct 1937. In German.	1.50
71-77 Vol. 1 PB L 70508	Storage treatment of fish products. Oct 1937. In German.	1.50
78-80 Vol. 1 PB L 70508	Meat refrigeration. Sep 29, 1937. In German.	1.50
81-88 Vol. 1 PB L 70508	Germany's supply of plant fibers. Oct 1, 1937. In German.	1.50
89-93 Vol. 1 PB L 70508	Cassation of fermentation fodder milk. Oct 1 1937. In German.	1.50
94-98 Vol. 1 PB L 70508	Step photometric determination of lactic acid. 1938. In German.	1.50
99-105 Vol. 1 PB L 70508	Method for detecting fat spoilage. Oct 1, 1937. In German.	1.50
106-107 Vol. 1 PB L 70508	Composition of oils from German linseed crops. 1938. In German.	1.50
108-122 Vol. 1 PB L 70508	Biological syntheses of raw material. Oct 1, 1937. In German.	1.50
123-128 Vol. 1 PB L 70508	Raw material "fat." Oct 1, 1937. In German.	1.50
129-133 Vol. 1 PB L 70508	Changes in the nutrition program of the German people and the vitamin supply. Oct 1, 1937. In German.	1.50

134-142 Vol. 1 PB L 70508 — Fundamental scientific rules for keeping salt water fish fresh. Oct 1, 1937. In German. 1.50

143-150 Vol. 1 PB L 70508 — Potato as raw material. Oct 1, 1937. In German. 1.50

151-166 Vol. 1 PB L 70508 — Production of fat from microorganisms. Oct 1, 1937. In German. 2.00

167-169 Vol. 1 PB L 70506 — Composition of the fat of Oidium lactis (Cosporalactis). 1938. In German. 1.50

170-179 Vol. 1 PB L 70508 — Chemistry of fermentation of chicory. 1938. In German. 1.50

180-183 Vol. 1 PB L 70508 — New experiences in clarifying unfermented fruit juices. 1938. In German. 1.50

184-189 Vol. 1 PB L 70508 — Experiments for sterilizing unfermented fruit juices by means of ultra-violet light. 1938. In German. 1.50

190-195 Vol. 1 PB L 70508 — The tasks of agricultural research in "Anschluss" Austria. 1938. In German. 1.50

196-204 Vol. 1 PB L 70508 — Stability and spoilage phenomena of whole milk powder. 1938. In German. 1.50

205-210 Vol. 1 PB L 70508 — Methods for recognition of the internal state of health of cereals. Oct 1 1937. In German. 1.50

211-216 Vol. 1 PB L 70508 — Freezing of fruits and vegetables. Oct 1, 1937. In German. 1.50

217-221 Vol. 1 PB L 70508 — Production of edible fat from fresh bones. 1938. In German. 1.50

222-225 Vol. 1 PB L 70508 — Cultivation and processing non-darkening potatoes. 1938. In German. 1.50

226-236 Vol. 1 PB L 70508 — The darkening of potatoes. 1938. In German. 1.50

238-237 Vol. 1 PB L 70508 — Cultivation of non-darkening potatoes. 1938. In German. 1.50

238-243 Vol. 1 PB L 70508 — The influence of the manner of preparation and the use of the fireless cooker on the vitamin - C - content of some vegetables. 1938. In German. 1.50

244-247 Vol. 1 PB L 70508 — The production of ethyl galactide from yellow sweet lupines. 1938. In German. 1.50

248-254 Vol. 1 PB L 70508 — Rapid determination of the egg-content in dough products by a volumetric method. 1938. In German. 1.50

255-270 Vol. 1 PB L 70508 — Investigations on the durability of apples under different storage conditions. 1938. In German. 2.00

271-280 Vol. 1 PB L 70508 — Influence of kneading on the quality of dough and bread. 1938. In German. 1.50

281-293 Vol. 1 PB L 70508 — New process for preservation of saltwater fish. 1938. In German. 1.50

294-296 Vol. 1 PB L 70508 — Preservation of saltwater fish. 1938. In German. 1.50

297-299 Vol. 1 PB L 70508 — Investigations of the physiological evaluation of starch syrup. 1938. In German. 1.50

300-301 Vol. 1 PB L 70508 — Method for determination of butter fat according to Gerber as a method generally applicable for fat determination in acid-soluble food. 1938. In German. 1.50

302-307 Vol. 1 PB L 70508 — The volumetric determination of vitamin C in milk and dairy products with consideration of sources of errors. 1938. In German. .50

308-310 Vol. 1 PB L 70508 — Water content of roasted coffee. 1938. In German. 1.50

311-314 Vol. 1 PB L 70508 — The vitamin C and A content of sweet must. 1938. In German. 1.50

315-317 Vol. 1 PB L 70508 — Lecture of Prof. F. E. Nottbohm at a meeting of German food chemists. 1938. In German. 1.50

318-327 Vol. 1 PB L 70508 — Removal of arsenic from wine. May 25, 1938. In German. 1.50

328-336 Vol. 1 PB L 70508 — The importance of the starch industry to the food supply. May 25, 1938. In German 1.50

337-343 Vol. 1 PB L 70508 — Composition of German bread. May 25, 1938. In German. 1.50

344-350 Vol. 1 PB L 70508 — Bran color and degree of grinding of flours. May 25, 1938. In German. 1.50

351-352 Vol. 1 PB L 70508 — Determination of crude fiber by K. Scharrer. May 25, 1938. In German. 1.50

353-362 Vol. 1 PB L 70508 — Method for analysis of the qualitative properties of horticultural products - especially vegetables. May 25, 1938. In German. 1.50

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Brief abstracts of the individual items on the above reel AA 1, PB L 70508, prepared by FIAT personnel in Germany. Numbers on cards represent page numbers.

PB L 70509. REICHSARBEITSGEMEINSCHAFT "LANDWIRTSCHAFTLICHE GEWERBEFORSCHUNG," BERLIN. Treatment of preserves and food research. (FIAT Microfilm Reel AA 2, Frames not numbered) 1940-1941. 607 f. Price: Microfilm-$6.00 - Enlargement print-$61.00
This reel prepared by FIAT investigators in Germany consists of volume III, 1940 (pages 1-598) and of volume IV, 1941 (pages 1-623) of the periodical "Vorratspflege und Lebensmittelforschung, Berlin." Volume I and volume II are included in reel AA 1, PB L 70508. Volume V is included in reel AA 3, PB L 70510. Individual items are listed below and will be available as enlargement prints. The numbers given indicate page numbers only, since two pages appear as a single frame. Please include PB, volume, and page numbers when ordering individual items. In German.

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469-488 Vol. 4 PB L 70509 Comparative physico-chemical researches on potatoes stored in cellars and pits. 1941. In German. 1.50

488-497 Vol. 4 PB L 70509 Usability of mushrooms growing in Germany as foods and fodder. 1941. In German. 1.50

497-506 Vol. 4 PB L 70509 Water-soluble and total phosphoric acid in meat and sausages and their determination. 1941. In German. 1.50

506-512 Vol. 4 PB L 70509 Determination of lactic acid in grape and fruit wines. 1941. In German. 1.50

513-525 Vol. 4 PB L 70509 Studies on the observation of the enzymatic decomposition of pectin. 1941. In German. 1.50

526-531 Vol. 4 PB L 70509 Reducing capacity of the potato for 2,6-dichlorophenolindophenol during the drying of slices. 1941. In German. 1.50

531-540 Vol. 4 PB L 70509 The storage of tomatoes. 1941. In German. 1.50

540-546 Vol. 4 PB L 70509 Effect of manuring and irrigation on the starch content and activity of amylase of potatoes during the harvest and in storage. 1941. In German. 1.50

546-552 Vol. 4 PB L 70509 The losses of nutritive value during the preliminary treatment of dehydrated vegetables. 1941. In German. 1.50

553-572 Vol. 4 PB L 70509 Micro determination of alcohol in fruit products. 1941. In German. 1.50

572-623 Vol. 4 PB L 70509 Production and storage of fruit pulp with special consideration of the preservation of vitamins and pectins. 1941. In German. 3.00

PB L 70509-S. REICHSARBEITSGEMEINSCHAFT "LANDWIRTSCHAFTLICHE GEWERBEFORSCHUNG," BERLIN. Treatment of preserves and food research. (FIAT Microfilm Reel AA 2, Frames not numbered, abstract cards.) 1940-1941.
141 p. Price: Microfilm-$3.00 - Photostat-$10.00
Brief abstracts of the individual items on the above reel AA 2, PB L 70509, prepared by FIAT personnel in Germany. Numbers on cards represent page numbers.

PB L 70510. INSTITUT FÜR NAHRUNGSMITTELCHEMIE, BERLIN. Treatment of preserves and food research. (FIAT Microfilm Reel AA 3, Frames not numbered) 1941-1942.
628 f. Price: Microfilm-$6.00 - Enlargement Print-$63.00
This reel prepared by FIAT investigators in Germany consists of volume 82, 1941, (pages 1-589) of the periodical "Zeitschrift für Untersuchung der Lebensmittel, Berlin" and of volume V, 1942, (pages 1-462) of the periodical "Vorratspflege und Lebensmittelforschung, Berlin." For volume I and volume II of the latter see reel AA 1, PB L 70508. Volumes III and IV will be found on reel AA 2, PB L 70509. Individual items are listed below and will be available as enlargement prints. The numbers given indicate page numbers only, since two pages appear on a single frame. Please include PB, volume, and page numbers when ordering individual items.
In German.

Pages	Title	Price
III-V Vol. 82 PB L 70510	Table of contents. 1941. In German.	$1.50

1-11 Vol. 82 PB L 70610 — The sulfur content of foods as an analytical index. Jul 5, 1940. In German. 1.50

12-16 Vol. 82 PB L 70610 — Determination of the refraction in the mercury serum of milk. Mar 12, 1941. In German. 1.50

17-19 Vol. 82 PB L 70610 — The detection of very small parts of bones in sausage. Feb 15, 1941. In German. 1.50

19-33 Vol. 82 PB L 70610 — Statistical investigations and production control in the food industry. Mar 15, 1941. In German. 1.50

33-37 Vol. 82 PB L 70610 — The reducing substances of honey. Feb 8, 1941. In German. 1.50

38-44 Vol. 82 PB L 70610 — The formation of brown pigments of tobacco leaves gathered in vital state. Mar 5, 1941. In German. 1.50

44-45 Vol. 82 PB L 70610 — Influence of admixtures on the ash content of wheat flour. Apr 19, 1941. In German. 1.50

46-112 Vol. 82 PB L 70610 — Abstracts of German and foreign reports concerning the ingredients of food, vitamins, analytical methods and apparatus. List of authors and subject heading list. 1941. In German. 3.50

113-121 Vol. 82 PB L 70610 — The stability of ascorbic acid (Vitamin C). May 12, 1941. In German. 1.50

121-123 Vol. 82 PB L 70610 — Titrimetric determination of citric acid by photochemical precipitation of acetone dicarboxylic acid. Apr 7, 1941. In German. 1.50

124-128 Vol. 82 PB L 70610 — Composition and critical examination of fresh Berlin blood-pudding and liver-sausage. Apr 7, 1941. In German. 1.50

128-142 Vol. 82 PB L 70610 — Control and critical examination of edible fats in a predominantly rural district for the year 1940/41. Apr 19, 1941. In German. 1.50

142-144 Vol. 82 PB L 70610 — Comparison of the nutritive power of lard with that of several vegetable oils. Feb 12, 1942. In German. 1.50

145-156 Vol. 82 PB L 70610 — The determination of fat in milk and cream caramels. May 2, 1941. In German. 1.50

156-157 Vol. 82 PB L 70610 — The cause of the reddening of herring meals cooked with onions. Apr 15, 1941. In German. 1.50

157-209 Vol. 82 PB L 70610 — Abstracts of German and foreign reports concerning the ingredients of food, vitamins, analytical methods and apparatus. 1941. In German. 3.00

209-215 Vol. 82 PB L 70610 — A group reaction suitable for detection and quantitative analysis of anthocyanine, catechin tannins and related vegetable components. Jun 2, 1941. In German. 1.50

215-241 Vol. 82 PB L 70510 — Milk sera and the refraction chlorine index according to Beckel. May 19, 1941. In German. 1.50

241-244 Vol. 82 PB L 70510 — Determination of the proportion of mineral substances in cooked sausages. May 24, 1941. In German. 1.50

244-248 Vol. 82 PB L 70610 — Contributions to the detection of cellulose derivatives soluble in water. Jun 17, 1941. In German. 1.50

249-252 Vol. 82 PB L 70610 — The behavior of "Fondin" in the digestion. Jun 23, 1941. In German. 1.50

253-255 Vol. 82 PB L 70610 — Information on the chemical composition of the more important types of Hungarian morellos. May 28, 1941. In German. 1.50

256-304 Vol. 82 PB L 70610 — Abstracts of German and foreign reports concerning the ingredients of food, vitamins, analytical methods and apparatus. 1941. In German. 2.50

305-316 Vol. 82 PB L 70610 — Contribution to the knowledge of the chemical reaction of arsenate and arsenite in alcoholic fermentation. Jun 6, 1941. In German. 1.50

317-329 Vol. 82 PB L 70610 — Is plasma of blood a binding agent? Jun 23, 1941. In German. 1.50

329-337 Vol. 82 PB L 70610 — Composition of blood of slaughter cattle and the detection of adulteration with water. Jul 10, 1941. In German. 1.50

337-343 Vol. 82 PB L 70610 — Influence of water and alcohol, with and without addition of acid, on tannic and phlobaphene-like ingredients of cocoa beans and cocoa powder. Jun 7, 1941. In German. 1.50

343-348 Vol. 82 PB L 70610 — Small metallic particles occuring in chocolate products. Nov 7, 1941. In German. 1.50

348-351 Vol. 82 PB L 70610 — Information on the chemical composition of important Hungarian apricot species. May 28, 1941. In German. 1.50

351-356 Vol. 82 PB L 70610 — The sugaring-limit of German wines. Jul 7, 1941. In German. 1.50

356-400 Vol. 82 PB L 70610 — Abstracts of German and foreign reports concerning the ingredients of food, vitamins, analytical methods and apparatus. 1941. In German. 2.50

401-416 Vol. 82 PB L 70610 — Contribution to the composition, and chemical classification of the quality of fermented oriental tobaccos. Jul 21, 1941. In German. 1.50

417-430 Vol. 82 PB L 70610 — Investigations on canned fruits and vegetables. Artificial green coloring with copper. Jun 1941. In German. 1.50

430-436 Vol. 82 PB L 70610 — The influence of the status of ions in blanching water on the biological quality of dried vegetables (vitamin C and its natural companions). Aug 20, 1941. In German. 1.50

437-438 Vol. 82 PB L 70610 — Sulfur content of albumin hydrolysates. Oct 2, 1940. In German. 1.50

439-451 Vol. 82 PB L 70610 — The difference between wine-vinegar and alcohol-vinegar. Jun 16, 1941. In German. 1.50

451-454 Vol. 82 PB L 70510 — A quick method for the Kjehldahl determination of nitrogen. Jun 12, 1941. In German. 1.50

454-488 Vol. 82 PB L 70510 — Abstracts of German and foreign reports concerning the ingredients of food, vitamins, analytical methods and apparatus. 1941. In German. 2.00

489-497 Vol. 82 PB L 70510 — The determination of the sulfate content of milk. Oct 2, 1940. In German. 1.50

497-498 Vol. 82 PB L 70510 — Special kind of milk dilution. Sep 1, 1941. In German. 1.50

498-501 Vol. 82 PB L 70510 — Ascorbic acid in orange and lemon peelings. Aug 25, 1941. In German. 1.50

501-504 Vol. 82 PB L 70510 — Production and testing of ascorbic acid oxidase. Aug 25, 1941. In German. 1.50

504-506 Vol. 82 PB L 70510 — Analytical procedures with pectins. Carrying out the calcium pectate process. Aug 7, 1941. In German. 1.50

507-509 Vol. 82 PB L 70510 — Italian savory. Sep 5, 1941. In German. 1.50

509-510 Vol. 82 PB L 70510 — Volumetric determination of sulfurous acid in vinegar. Aug 3, 1941. In German. 1.50

510-589 Vol. 82 PB L 70510 — Reports from German and foreign newspapers concerning the ingredients of food, vitamins, analytical methods and apparatus. Authors and subject matter index. 1941. In German. 7.00

1-19 Vol. 5 PB L 70510 — Storage test with potatoes, particularly cold storage. 1942. In German. 1.50

20-27 Vol. 5 PB L 70510 — Vitamin-C content of Brussels sprouts and green kale of the harvest year 1940 in different harvest times and in cold storage. 1942. In German. 1.50

27-32 Vol. 5 PB L 70510 — Determination of the water content in dry vegetables. 1942. In German. 1.50

32-42 Vol. 5 PB L 70510 — The occurrence of Cu, Sn, Fe and Zn in fats and their action on their stability during storage. 1942. In German. 1.50

42-70 Vol. 5 PB L 70510 — Oxidases of barley, malt and beer-wort. Do oxidases influence the color of the beer-wort? 1942. In German. 1.50

70-73 Vol. 5 PB L 70510 — Composition of natural wines, vintage 1940, of the Middle Moselle and its tributaries. 1942. In German. 1.50

74-83 Vol. 5 PB L 70510 — The viniculture district of Silesia in the year 1941. 1942. In German. 1.50

83-85 Vol. 5 PB L 70510 — Detecting the addition of tartrates to grape wine. 1942. In German. 1.50

85-87 Vol. 5 PB L 70510 — The relation between must weight and alcohol content of natural wines of the vintage 1940 of the Moselle viniculture district. 1942. In German. 1.50

88-99 Vol. 5 PB L 70510 — The treatment of fresh fish in the Norwegian fish industry. 1942. In German. 1.50

100-125 Vol. 5 PB L 70510 — Technical experiments for producing fodder yeast from sulfite waste liquors of wood from coniferous and broad leaved trees. 1942. In German. 1.50

126-139 Vol. 5 PB L 70510 — The energy production of microorganisms. 1942. In German. 1.50

140-149 Vol. 5 PB L 70510 — Method of sugar beet research. A new way of cold digestion. 1942. In German. 1.50

149-154 Vol. 5 PB L 70510 — Method of sugar determination in sugar beets. 1942. In German. 1.50

154-163 Vol. 5 PB L 70510 — Tests on yeast from rye "sours." 1942. In German. 1.50

163-174 Vol. 5 PB L 70510 — The content of germs in whole wheat grain and whole wheat bread. 1942. In German. 1.50

174-175 Vol. 5 PB L 70510 — Lime determination in milk. 1942. In German. 1.50

176-178 Vol. 5 PB L 70510 — Must statistics of the vintage 1941 for the upper Moselle, middle Moselle, Sauer, Saar, Lieser and Ruwer. 1942. In German. 1.50

179-199 Vol. 5 PB L 70510 — The aromatic substances of wines. 1942. In German. 1.50

200-209 Vol. 5 PB L 70510 — Activity of the Institute for Refrigeration of the Technical University of Karlsruhe from April 1, 1939 - March 31, 1942. 1942. In German. 1.50

209-214 Vol. 5 PB L 70510 — Quality and bacteriological state of edible curd. 1942. In German. 1.50

214-226 Vol. 5 PB L 70510 — Production of Tilsit cheese from milk of cows suffering from udder disease. 1942. In German. 1.50

227-233 Vol. 5 PB L 70510 — Whey and its utilization. 1942. In German. 1.50

233-250 Vol. 5 PB L 70510 — Grain, flour and bread. 1942. In German. 1.50

250-256 Vol. 5 PB L 70510 — The utilization of mushrooms growing in German woods for food and fodder. 1942. In German. 1.50

256-258 Vol. 5 PB L 70510 — The possibility of using mushrooms as fish food. 1942. In German. 1.50

258-263 Vol. 5 PB L 70510 — Characteristics of the "Marillen" (apricots) in the Danube territory in 1940 and 1941. 1942. In German. 1.50

264-281 Vol. 5 PB L 70510 — The group of fluorescent bacteria:
1. Bacterium pyocyaneum
2. Bacterium fluorescens
3. Bacterium putidum
4. Bacterium syncyaneum.
1942. In German. 1.50

281-292 Vol. 5 PB L 70510 — The pathogenic eumycetes. 1942. In German. 1.50

292-303 Vol. 5 PB L 70510 — Detection of free aldehyde in rancid fats. 1942. In German. 1.50

303-306 Vol. 5 PB L 70510 — Resistance of some metals to potato juice. 1942. In German. 1.50

306-308 Vol. 5 PB L 70510 — The determination of vitamin-C in milk and dairy products by methylene blue reduction. 1942. In German. 1.50

308-313 Vol. 5 PB L 70510 — Determination of nicotinic acid (antipellagra vitamin in vegetables.) 1942. In German. 1.50

313-333 Vol. 5 PB L 70510 — The aroma substances of wines. 1942. In German. 1.50

333-340 Vol. 5 PB L 70510 — A contribution to the calculation of weight relationship of liquids according to pycnometer-method and to the application of the tabaric formula. 1942. In German. 1.50

340-347 Vol. 5 PB L 70510 — Composition of natural wines, vintage 1941, of the middle Moselle, Saar and Ruwer. 1942. In German. 1.50

347-352 Vol. 5 PB L 70510 — Bakery products for diabetics. 1942. In German. 1.50

352-367 Vol. 5 PB L 70510 — Meat attacked by germs. 1942. In German. 1.50

368-369 Vol. 5 PB L 70510 — Precautions for decreasing contamination in meat due to germs that cause decomposition. 1942. In German. 1.50

369-370 Vol. 5 PB L 70510 — Boundary map of German communities. 1942. In German. 1.50

371 Vol. 5 PB L 70510 — Biography of Prof. Dr. F. E. Mottbohm. 1942. In German. 1.50

372-394 Vol. 5 PB L 70510 — The influence of ultra violet rays on the metabolism of mycobacterium tuberculosis. (Types: gallinaceus and bovinus). 1942. In German. 1.50

394-397 Vol. 5 PB L 70510 — Reduction capacity of the potato to 2,6-dichlorophenol-indophenol during flake production. 1942. In German. 1.50

398-403 Vol. 5 PB L 70510 — Determination of rye-flour and potato-flour in wheat-flour. 1942. In German. 1.50

403-408 Vol. 5 PB L 70510 — Spoilage of food in presence of moisture. 1942. In German. 1.50

408-424 Vol. 5 PB L 70510 — Nitrogen compounds in fermenting must and new wine. 1942. In German. 1.50

424-426 Vol. 5 PB L 70510 — Relations between must weight and alcohol content in natural pure wines of 1941 vintage of Moselle and its tributaries. 1942. In German. 1.50

426-428 Vol. 5 PB L 70510 — The Silesian wine-growing district in 1942. 1942. In German. 1.50

428-437 Vol. 5 PB L 70510 — Micro determination of alcohol in alcoholic chocolates. 1942. In German. 1.50

437-453 Vol. 5 PB L 70510 — Report on progress concerning grain, flour and bread 1941. 1942. In German. 1.50

454-462 Vol. 5 PB L 70510 — Utilization of mushrooms for food and forage. 1942. In German. 1.50

PB L 70510-S. INSTITUT FÜR NAHRUNGSMITTELCHEMIE, BERLIN. Treatment of preserves and food research. (FIAT Microfilm Reel AA 3, Frames not numbered, abstract cards) 1941-1942. 96 p. Price: Microfilm-$3.00 - Photostat-$7.00

Brief abstracts of the individual items on the above reel # AA 3, PB L 70510, prepared by FIAT personnel in Germany. Numbers on cards represent page numbers.

PB L 85791. WAGNER, KARL H. Synthetic fats. Sep 1947. 157 p. Price: Microfilm-$4.75 - Photostat-$16.00

The contents of this 154-page report deals essentially with the following four viewpoints: Production of synthetic fats to be used as food, changes of fats during storage, physiology of the fat metabolism, and synthetic fat in animal experimentation and human pathology. Starting materials for the production of synthetic fat are the fatty acids which are obtained from the paraffins of the Fischer-Tropsch process by catalytic oxidation with atmospheric oxygen subsequently esterified with glycerol (p. 3). The numerical data necessary for computation and cost calculations are given on pages 3-6. After a short characterization of the differences between synthetic and natural fats (pp. 6/7) and of the importance of glycerol for the human organism, unsuccessful biological tests with synthetic glycerol and glycerol substitutes are described (p. 8). The following fifty pages are devoted to a detailed description of the theory and practice of the paraffin oxidation and the various products and byproducts obtained. The biological fat synthesis (theory, synthesis from protein, carbohydrates, endomyces, etc.) is also discussed in great detail on pages 58-67. The decomposing effects of autooxidation, enzymes, formation of methylketone and secondary reactions on fats in storage and their prevention is presented on pages 66-79. The results of metabolic tests on rats and humans performed with three kinds of fats (natural coconut oil, "resynthesized" coconut oil, and a synthetic coconut oil with odd numbers of C-atoms) are described (pp. 80-86). The absorption of saturated fatty acids, the significance of the respiratory quotient for the fat metabolism, the decomposition of synthetic fat by pancreatic lipase, and the decomposition under varied pH conditions are the topics of pages 87-94. Other animal experiments (pp. 95-109) were performed to study the fate of synthetic fats in the intermediate metabolism, their absorption and deposition, the formation of dicarboxylic acids after administration of fats, and the administration of dicarboxylic acids in pure substance. Based on these experiments a theory of the decomposition of the fats in the organisms is established (pp. 109-120). On pages 121-142 experimental and clinical experiences are reported which were observed in the administration of synthetic fats. A recently produced synthetic fat (producer: German Fatty Acids Works, Witten) showed a favorable absorption due to its low melting point between 27 and 31° C. (p. 122). The experiments performed deal with administration of β-carotene dissolved in synthetic fat (pp. 123-125), absorption of the synthetic fat in man (pp. 125-126). Blood picture, red and white cell counts, liver and renal function tests showed no pathological changes if synthetic fats were given to healthy persons. Special attention is given to the behavior of cholesterol in the intermediate metabolism (pp. 127-129), to the behavior of the cholesterol under administration of synthetic fats (pp. 129-131), and to the influence of the administration of synthetic fat on the serum lipase (p. 131). Of special interest are the determination of the fat content of the blood, its acetone content, and the hyperketonemia after fat administration (pp. 132-135). Due to its content of fatty acids with odd numbers of C-atoms, synthetic fats form only few acetone bodies thus diminishing the danger of

acidosis. This means a more economic use of insulin in the therapy of diabetes mellitus (pp. 134/135). On pages 135-137 the relations between administration of fats and oxalic acid are discussed. The final pages are devoted to descriptions of diseases of the gastro-duodenal system, the hepatic system, and the diabetes mellitus. An extensive bibliography is given on pages 143-154. In German.

FUELS AND LUBRICANTS

PB L 78602. BAKER, HAYWARD R. and ZISMAN, WILLIAM A. Anti-rust additives for lubricating, power transmission and protective oils. (Nav Res Lab Rept P-2474; Nav Res Lab Problem P-51). Feb 1945. 121 p. Price: Microfilm-$3.00 - Photostat-$9.00
This report is the first of a series concerning rust inhibitors for lubricating, power transmission, and protective oils. It first deals with the physical and chemical factors concerned in the mechanism of rust inhibition by the use of polar type additives. A number of film phenomena are shown to be involved, several of which are new to science, and they have been related to past research of this laboratory in the field of surface chemistry. The various commonly used methods of testing oils for their rust inhibitory properties have been analyzed in terms of the theory previously developed, and it has been shown that they each emphasize different aspects of the problem. The effect of salt water in accelerating the corrosion of iron covered with inhibited oils has been studied, and the mechanism has been shown to be one of ionic penetration through the adsorbed monolayer of the rust preventive compound. Finally recommendations have been made as to the correct use of the various rust inhibition test methods described. Photographs and tables are included.

PB L 78599. BAKER, H. R. and others. Properties of the Carbide & Carbon synthetic polymer B-0-100 fluids of interest in lubrication and hydraulics. Progress report. (Nav Res Lab Rept P-2273). Feb 1944. 108 p. Price: Microfilm-$3.00 - Photostat-$8.00
This report discusses the results of tests made on inhibited and uninhibited 135B-0-1100, 250B-0-100, and 400B-0-100 grades. Individual reports concerning different phases of research are presented, together with tabulated data, graphs and photographs.

PB L 78729. LOW temperature distillation of coal at Azienda Carboni Italiani, S., Antico, Sardinia. Translation. n. d. 39 p. Price: Microfilm-$1.00 - Photostat-$3.00
The plant carries out low-temperature distillation of fines from the Sulcis coal mines, nearby, and it is proposed to produce industrial coke from the fines, at the same time recovery tar and light fuel oils. The plant is located on an unfinished navigable canal, which connects the Gulf of Palmas and S. Antioco Bay. The fuel to be processed arrives in railroad cars and is unloaded either directly into feed hoppers or into nearby bins, which are divided into compartments for the various grades of coal which are used. A description is given of the plant and of the general plant operation. Appendices give material and power consumption figures, process details, and recovery products. Several diagrams (with Italian legends) are included.

PB L 78601. POHL, HERBERT A. Viscosity breakdown of oils. (Nav Res Lab Rept P-2075). May 1943. 38 p. Price: Microfilm-$1.00 - Photostat-$3.00
An analysis of the causes of the instability of the viscosity characteristics of oils is presented. Correlations are made between the structure of the molecules and the tendency of the oils to break down. It is demonstrated that the larger molecules present in oil can be torn apart by the violent motions which they experience in modern machinery. From fundamental considerations, predictions can be made on the stability of the large molecules which are used as oil additives, and of their breakdown by certain types machinery. This knowledge should enable more intelligent choice to be made in compounding oils than before, and reduce dependence on trial and error. Tables, graphs and bibliography are included. An appendix also gives the derivation of the equation for polymer breakdown due to shear.

* PB L 78992. U. S. FIELD INFORMATION AGENCY, TECHNICAL. AD 5 paste for coal tar hydrogenation. (Tech Bulletin T-27). Apr 1947. 1 p. Price: Mimeo-$0.25
This bulletin describes briefly, the preparation of a paste from Terrana bleaching clay which acts as catalyst support. This paste was mentioned in FIAT Final Report 299 (PB 1307, v. 1, p. 134 of this Bibliography) entitled "Supplemental report on the Ruhrol Hydrogenation Plant, Welheim, Ruhr and also in CIOS File XXX-104, item 30, (PB 23739, v. 2, p. 100) entitled "Visit to Botrop-Welheim Hydrogenation Plant."

INSTRUMENTS (PROFESSIONAL, SCIENTIFIC AND CONTROLLING)

* PB L 80660. ATKINSON, R. d'E. Interrogation of Dr. L. Rohde: Manufacture of quarts clocks. (BIOS Interrogation Rept 459). Apr 1947. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
In this report Dr. Rohde of the firm Rohde & Schwartz, Munich, manufacturer of high-precision quarts clocks, gives a brief description of the crystal mounting, thermostating, circuits, demultiplication, performance, and cost of these clocks.

* PB L 80652. COOPER, B. S. and RAYNER, E. H. Interrogation of Dr. Kinder: Electron microscopy. (BIOS Interrogation Rept 501). May 1947. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
Dr. Kinder had worked on the design and applications of a magnetic electron microscope during the period 1939-1945. The microscope used by Dr. Kindler was a research instrument used for the study of magnetic lens systems, for the general study of microscope applications and for comparison with the electrostatic microscope, which A.E.G. were developing commercially. This research instrument is described in this report. Included is a list of papers on the microscope and its applications by Dr. Kindler and others.

PB L 80712. DEUTSCHE KRAFTFAHRTFORSCHUNG IM AUFTRAG DES REICHS-VERKEHRSMINISTERIUMS. A pneumatic method for linear measurements. Critical investigation of the Solex method. 1944. 41 p. Price: Microfilm-$1.00 - Photostat-$3.00
This document describes linear measuring methods based on determination of the air pressure flowing into a chamber through one nozzle and leaving it through another nozzle against a fixed obstacle as applied in the French Solex measuring instruments. Drawings, graphs and tables included. Bibliography. In German.

PB L 80894. FEDERN, K. Effective mass balancing of gyros. Oct 1944. 24 p. Price: Microfilm-$1.00 - Photostat-$2.00
This report deals with the rationalization of mass-balancing by local compensation; compensation in two planes to balance errors in the C. G. position and wobble; the required accuracy of mass-balancing; optimum compensating speed; comparison of balancing by compensating screws and by drilling; comparison between radial and axial balancing holes; chip-removal in drilling; balancing in an auxiliary compensating frame. Examples, tables and graphs included. In German. This is a report of Carl Schenk G.m.b.H., Darmstadt. See PB 80720 for an English translation of this document.

PB L 80720. FEDERN, K. Effective mass balancing of gyros and small motor rotors. RTP/TIB Translation no. 2595.

Instruments (contd)

Oct 1944. 15 p. Price: Microfilm-$1.00 - Photostat-$1.00
This is a translation issued by the British Ministry of Aircraft Production of the original German report contained in PB 80894 above.

PB L 80892. FORTUNA-WERKE SPEZIALMASCHINENFABRIK A.G., STUTTGART-BAD CANNSTATT. Hirth minimeter: Precision measuring instruments for shop and inspection room. n. d. 29 p. Price: Microfilm-$1.00 - Photostat-$2.00
The minimeter which is set by means of slip gauges, plug gauges or other masters indicates the amount by which the piece to be tested differs from the master and whether the specified tolerance is not exceeded. According to the type of minimeter used, readings as fine as to .00005 inch can be taken and increment of .000025 inch can be estimated. This catalog describes and illustrates the instruments mostly used in connection with the Hirth minimeter. The text is English.

*PB L 75891. HALLIMOND, A. F. and PHILLIPS, F. COLES. Two-circle goniometers and polarising film (Germany). (BIOS Final Rept 1069, Item 9, 21) Jan 1947. 28 p. Price: Microfilm-$1.00 - Photostat-$2.00
This document is a report of a team of British investigators in search of new developments in two-circle goniometers and polarising filters in Germany. Some goniometers were found in the mineralogical and geological departments of a number of German universities, and these instruments are briefly described. Most of the report is devoted to the German process of manufacturing polarizing filters. The theoretical basis of the process is described, together with adaptation to actual manufacturing and the advantages of such filters over other polarizing devices. Drawings and graphs included.

PB L 80768. RENTMEESTER, L. R. Service test of timer, modified, continuous. Final report. (Air Proving Ground, Eglin Field Fla. Project 8-46-2). Mar 1947. 22 p. Price: Microfilm-$1.00 - Photostat-$2.00
The project was to determine whether the Gennerte Mogul, modified, continuous timer for serving technicians engaged in photographic printing and developing was suitable for standardization. It was concluded that this modified continuous timer was not suitable for standardization and it was recommended that further attempts to modify the timer be discontinued. Photographs are included.

PB L 21446-R. U. S. AERONAUTICAL BOARD. Inspection process: magnetic particle. (Army-Navy Aeronautical Specification AN-I-32a) Mar 1947. 7 p. Price: Microfilm-$1.00 - Photostat-$1.00
Supersedes AN-I-32 (PB 21446).

PB L 18639. U. S. ARMY TECHNICAL INTELLIGENCE CENTER, TOKYO. Japanese medical equipment, forceps, gauge, wood-th. Jan 1946. 2 p. Price: Microfilm-50¢ - Photostat-$1.00

MACHINERY (EXCEPT ELECTRICAL)

PB L 80709. AMAG-HILPERT, NÜRNBERG. Flat bilge pump - spare cooling water-pump. Apr 1944. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
This consists of an assembly drawing for above pump.

*PB L 81636. DUNCAN, J. E. and BELL, F. J. Industrial dust extraction methods as applied in the German soft hemp and jute factories. (BIOS Final Rept 1426, Item 22). Mar-Apr 1947. 57 p. Price: Microfilm-$2.25 - Photostat-$6.00
This is a report of two British investigators on dust extraction methods and equipment in five German soft hemp and jute factories prepared on the bases of visits to these plants and interviews with its managing personnel. The dust extracting equipment in each of the visited plants is described and evaluated as to its efficiency. Drawings included.

PB L 80767. GILBERT, WILLARD R. Cooler, air, electric motor driven, type A-2, for storage of photographic supplies. Final report. (Air Proving Ground, Eglin Field Fla. Project 3-46-12). Jan 1947. 18 p. Price: Microfilm-$1.00 - Photostat-$2.00
The test described in this report was made to determine whether the type A-2 cooler, modified, was suitable for AAF use to cool the B-2 shelter used for the storage of photographic sensitized products under tropical or semi-tropical conditions. Photographs are included.

PB L 80832. JUNKERS FLUGZEUG-UND-MOTORENWERKE A.G., DESSAU. Tube-bending tool and a hand tool for the determination of length of rivets for various types of rivet heads. (AAF T-2 Translation 1915). May 1947. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
Description of a manually operated tool which bends pipes made out of light metal. No undesirable deformation occurs during the bending process. The pipes can be bent to any desired shape. Also described in this document is an automatic tool which selects rivets according to size, strength and type of rivet head.

PB L 80707. KRUPP, FRIED. Adjusting valve on lubricating pump - U-boat VIIC). Sep 1941. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
This is a detail drawing of a regulating valve of motor oil pumps of U-boats.

PB L 80708. KRUPP, FRIED. Assembly of the hydraulic motor V 38-6. May 1941. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
This is an assembly drawing of a hydraulic oil motor for U-boats.

PB L 80769. OWEN, H. S. Comparative test of fuel transfer units - powered. Final report. (Air Proving Ground, Eglin Field Fla. Project 3-45-60). Nov 1946. 94 p. Price: Microfilm-$2.00 - Photostat-$7.00
This fuel transfer unit consist of a pump and refueling unit assembly of a 30 gallon per minute gasoline engine-driven positive displacement pump and a single shut-off segregator built into the suction box. The tests are described in detail and results given. Tables and photographs are included.

PB L 73949. SPANNHAKE, W. Centrifugal and feed water pumps, and turbine flow. (FIAT Microfilm Reel AA 243, Frames 1-24) 1930. 24 F. Price: Microfilm-$1.00 - Enlargement Print-$2.50
This microfilm reel consists of three reports reprinted from Nos. 1 and 2 of "Turbinen und Pumpen," (1930) on power units for reservoir feed pumps, centrifugal pumps, and on turbine flow. The individual reports, listed below, will be available separately as enlargement prints only; the entire reel may be purchased in microfilm form for $1.00. Please include PB and frame numbers when ordering individual items from this microfilm reel.
In German.

Frames	Title	Price
1-10 PB L 73949	Heavy duty power units for high pressure reservoir feed pumps. Jan 1930. In German.	$1.50

Machinery (contd)

11-16 PB L 73949 — Experiments and calculations on the cavitation problem in centrifugal pumps. Feb 1930. In German. 1.50

16-24 PB L 73949 — Investigations on self-ventilation of an electric motor to obtain data on turbine flow. Feb 1930. In German. 1.50

MEDICAL RESEARCH AND PRACTICE, INCLUDING CLINICAL APPLICATION OF DRUGS AND PHARMACEUTICALS

PB M 1717-T. ANESTHETICS and sympathomimetics. Experiments with derivatives of oxyphenyl-ethanol-methyl-amines. Summary. n. d. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
This document consists of an English translation of a summary of a German inaugural dissertation which surveys the research in the field of anesthetics. For the complete German dissertation with English translation (summary untranslated) see PB 1717, v. 1, p. 142, of this Bibliography.

PB M 77834. BORGARD, W. Evaluation of atony of bladder in war. (Translation from München med. Wochenschrift 89: 488 (no. 22) 1942). (For original in German see PB 1696). 1942. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
This report appears to be an abstract (in English) of the German report. The disturbance is considered as a symptom of various primary diseases. For the original German report, see No. 20 of 26 articles comprising PB 1696, v. 2, p. 196, this Bibliography.

PB M 77836. BORGARD, W. Evaluation of ureteropelvic juncture on roentgenologic examination. (Translation from Zeitschrift für Urologie, Vol. 37, no. 7, 1943). (For German original see PB 1696). 1943. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
This report appears to be an abstract (in English) of the German article. In cases where primary changes in the ureters do not yet cause pronounced phenomena of passive congestion in the pelvix-calyx system of the kidney, pyelography was combined with pyeloscopy to objectivize the constancy of the observations in deliberate serial photographs. For the original German report see No. 24 of the 26 articles comprising PB 1696, v. 2, p. 196, this Bibliography.

PB M 77835. BORGARD, W. Pyelogenic focal infection. (Translation from Zeitschrift für Urologie, Vol. 37, no. 6, 1943). (For German original see PB 1696). 1943. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
This report appears to be an abstract (in English) of the German article. The report discusses the effects produced by a spreading of the renal infection to the terminal portion of the spinal cord. For the original German report, see No. 21 of the 26 articles comprising PB 1696, v. 2, p. 196, this Bibliography.

PB M 78696. BRYSON, VERNON and GRACE, EDWIN J. Aerosol therapy of respiratory disease: A report of fifty cases. n. d. 28 p. Price: Microfilm-$1.00 - Photostat-$2.00
Clinical experience of more than two years has shown antibiotic aerosol therapy to be a valuable supplement to parenteral treatment of respiratory disease, including intrinsic infectious asthma, bronchitis, bronchiectasis, sinusitis, and more recently, tuberculosis. Most of the cases were treated with penicillin in saline or zephiran chloride. The later reports include the use of penicillin and streptomycin in active pulmonary tuberculosis. Aerosol therapy is considered as a form of topical treatment. Topical administration of antibiotics in detergent solutions may provide the physical advantages associated with reduced surface tension and the antibacterial advantages contingent upon synergism and the reduced likelihood of drug-fast infection. Except in selected cases, aerosol therapy should be attempted before resorting to surgery. Bibliography.

PB M 77831. GÄRTNER, K. Visible influence of sulfonamides on bacteria in vitro. (Translation from Deutsche med. Wochenschrift 70: 336, no. 23/24 (June 9) 1944). (For original in German see PB 1696). 1944. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
This report appears to be an abstract (in English) of the German report. The electron-microscope showed the result of sulfonamide injury to bacteria. For the original German report see No. 9 of the 26 articles comprising PB 1696, v. 2, p. 196, this Bibliography.

PB M 78749. GJESSING, ERLAND C. and others. Fractionation, electrophoresis and chemical studies of proteins in sera of control and injured dogs. n. d. 39 p. Price: Microfilm-$1.00 - Photostat-$3.00
Fractionation procedures are described for the separation of proteins of dog serum according to principles and methods developed by Cohn and his associates. The percentage distribution of the proteins in main and subfractions are presented for the sera of control and injured (turpentine, heat, and bis (β-chloroethyl) sulfide) dogs. Three α-globulin-rich fractions, not present in detectable amounts in the serum of control dogs, can be separated from the serum of injured dogs. Analytical data for total lipide C, total cholesterol, free cholesterol, phospholipide, choline, hexosamine, and nitrogen are presented for many of the fractions. The α-and β-globulins are associated with the increased lipide concentrations noted in the sera of injured animals. Tables, graphs and bibliography are included. Report from the Biochemical Laboratory, University of Virginia, Charlottesville, under contract with the Chemical Warfare Service.

PB M 20504-S. HAAGEN, E. German research association. File 20504. 1941-1944. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
This is a further elaboration (in English) of the file abstracted in PB 20504, v. 2. p. 271, this Bibliography. The report was submitted to the U. S. Military Intelligence Section.

PB M 20504-S-2. HAAGEN, E. Research on virus diseases. Mar 1942. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
This is a further elaboration (in English) of the correspondence file of Prof. E. Haagen, Director of Hygiene, Strassburg. The original file is abstracted in PB 20504, v. 2, p. 271, this Bibliography. This report from the German Research Association was submitted to the Military Intelligence Section.

PB M 78694. KAREL, LEONARD and others. The intraperitoneal toxicity of some glycols, glycol ethers, glycol esters, and phthalates in mice. n. d. 24 p. Price: Microfilm-$1.00 - Photostat-$2.00
The acute, intraperitoneal median lethal doses for 16 solvents belonging to the glycol, glycol ether, glycol ester, and phthalate series were determined in Carworth Farms, female, albino mice, which were observed for 7 days following injection. The LD 50's in millimoles per kg. and the pathological changes are noted. Additional data include formulas, molecular weights, and specific gravities of the compounds; LD 50's, with their respective standard errors, in ml/kg., gm./kg., and millimoles/kg.; regression line slopes with their standard errors; highest and lowest volumetric doses resulting in 0 and 100% mortality,

respectively, during the first 24 hours following intraperitoneal injection and also for the 7 day observation period; and a tabulation with pertinent pathological comments, of the relative severity of the major pathological changes observed. Bibliography.

PB M 78700. NELSON, WILLIAM E. and others. Alteration of the distribution and excretion of streptomycin. Preliminary report. n. d. 7 p. Price: Microfilm-$1.00 - Photostat-$1.00
It was noted that, normally, streptomycin failed to penetrate reticulo-endothelial cells. It was demonstrated that when Swiss mice were injected intraperitoneally with a single dose of a mixture of an electronegatively charged dye (trypan blue) and an electropositively charged antibiotic (streptomycin), the blood, liver and spleen showed relatively high levels of streptomycin up to and including the twenty-five hour specimens. In every case, the unitage per grain of liver or spleen always exceeded that of the comparable blood sample. A table and brief bibliography are included. Report from Camp Detrick, Maryland.

PB M 77830. STICKL, O. and GÄRTNER, K. Effect of sulfonamide therapy during typhoid epidemic. (Translation from München. med. Wochenschrift no. 33/34 (Aug. 25) 1944). (For original in German see PB 1696). Aug 1944. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
This report appears to be an abstract (in English) of the German article. Sulfonamide treatment was administered to 203 of 376 patients during a typhoid fever epidemic in the spring of 1943; the remaining patients received only symptomatic treatment. The mortality rate of patients receiving sulfonamide treatment was 8.7% or only half the rate of patients receiving only symptomatic treatment. The mortality rate of those receiving early sulfonamide treatment was less than 1%. For the original German report, see No. 6 of the 26 articles comprising PB 1696, v. 2, p. 196, this Bibliography.

PB M 77832. STICKL, O. and GÄRTNER, K. Mode of action of sulfonamides and their chemotherapeutic application in dysentery. (Translation from Ztschr. f. Hyg. u. Infektionskr. 125: 226-264, no. 1 and 2, 1943). (For original in German see PB 1696). 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
This report appears to be an abstract (in English) of the German article. The results are given of experiments which were carried out at the Hygiene Institute of the University of Tübingen. Four problems have been investigated: (1) The effect of sulfonamide therapy on the normal and on the pathogenic flora in viva and in vitro and what part is played by bacterial antagonism and by bacteriophage in these changes; (2) the possibility of rendering bacteria - free lethal doses of dysentery toxin ineffective in animal experiments; (3) values which may be reached by sulfonamide concentration in the feces; and (4) the concept of the mode of action of the sulfonamides which seems to be justified with particular consideration of fluorescence and electron microscope results. For the original German report, see No. 10 of 26 reports comprising PB 1696, v. 2, p. 196, this Bibliography.

PB M 77829. STICKL, O. and GÄRTNER, K. Prospects of sulfonamide therapy for dysentery on base of experimental investigations. (Translation from Deutsche med. Wochenschrift 68: 509 (no. 20) 1942). (For original in German see PB 1696). 1942. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
This report appears to be an abstract (in English) of the German article. A number of sulfonamide drugs were found to have value in the chemo-therapy in bacillary dysentery. For the original German report, see No. 8 of the 26 articles comprising PB 1696, v. 2, p. 196, this Bibliography.

PB M 77833. STOCK, W. Chronic uveitis, its etiology and treatment. (Translation from a periodical whose name and date are not given). (For original in German see PB 1696). n. d. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
This report appears to be an abstract (in English) of the German article. The etiology and treatment of chronic uveitis are discussed. In several instances, where some type of cocci was present, sulfapyridine and sulfathiazole proved of value. The author considered the climate of the Black Forest to be a predisposing factor for this disease. For the original German report, see No. 14 of the 26 articles comprising PB 1696, v.2, p. 196, this Bibliography.

PB M 79564. VITELESS, M. S. and others. The medical requirements of the Civil Aeronautics Administration and the recommended medical requirements of the Personnel Licensing Division of the Provisional International Civil Aviation Organization. Jun 1947. 73 p. Price: Microfilm-$2.00-Photostat-$5.00
This report presents a clarification of the technical medical terminology found in the CAA regulations and in the PICAO recommendations. The PICAO materials are presented in full in Part A and the CAA materials are presented in full in Part B. The PICAO materials are organized as far as possible as they pertain to (1) vision, (2) ear, nose, throat, and equilibrium, (3) general physical condition, and (4) central nervous, the catagories in terms of which the CAA materials are organized.

METALS AND METAL PRODUCTS

PB L 81024. DURÉ, A. and CUNNINGHAM, R. L. The phase changes of SAE 2345 steel. 1946. 21 p. Price: Microfilm-$1.00 - Photostat-$2.00
This document is a reprint of the article "The Phase Changes of SAE 2345 Steel" published in "Transactions", Vomume XLIX, 1946, pp. 1 - 21 and deals with mechanical, structural and magnetic changes in SAE 2345 steel after quenching and tempering at various temperatures. X-ray and various other metallographic methods were used in the investigation.

PB L 73378. I.G. FARBENINDUSTRIE A.G., BITTERFELD, GERMANY. Aluminum alloys and magnesium alloys. (FIAT Microfilm Reel CC 147, Frames 3351-4001) 1935-1942. 471 f. Price: Microfilm-$5.50 - Enlargement print-$47.50
This reel was prepared by FIAT investigators in Germany. Individual items are listed below and will be available as enlargement prints. The entire reel may be purchased as a microfilm for $5.50. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
3351-3355 PB L 73378	Experiments on the intercrystalline corrosion of aluminum-magnesium (Hy9) alloys. By Vosskühler. Nov 11, 1935. In German.	$1.50
3356-3370 PB L 73378	These frames are missing.	
3371-3373 PB L 73378	Surface treatment of magnesium alloys with dichromate solutions. By Siebel. Nov 8, 1935. In German. Incomplete report.	1.50
3374-3377 PB L 73378	The fatigue limit of magnesium aluminum-zinc (AZW) alloys. By Buchmann. Aug 20, 1935. In German.	1.50
3378-3381 PB L 73378	Annealing of magnesium aluminum-zinc (AZ0) castings. By Spitaler. Nov 1, 1935. In German.	1.50
3382-3388 PB L 73378	The fatigue bending strength of magnesium aluminum-zinc formed parts. By Buchmann. Jun 19, 1935. In German.	1.50

3389-3392 PB L 73378 — These frames are perforated.

3393-3396 PB L 73378 — Fatigue strength of aluminum sand cast alloys of "Sterling metals." By Vosskühler. May 28, 1935. In German. 1.50

3397-3405 PB L 73378 — These frames are perforated.

3406-3410 PB L 73378 — Examination of an old "Hydronalium" float (He 60). By Siebel. May 13, 1935. In German. 1.50

3411-3421 PB L 73378 — Electric conductivity of the aluminum magnesium alloy "Hydronalium." By Vosskühler. May 21, 1935. In German. 1.50

3422-3426 PB L 73378 — These frames are defective.

3427-3429 PB L 73378 — The heat fatigue strength of the magnesium-aluminum-zinc (AZG) alloy. By Schultze. Apr 2, 1935. In German. 1.50

3430-3433 PB L 73378 — Heat treatment of magnesium-aluminum-zinc (AZG) sand castings. By Spitaler. Mar 20, 1935. In German. 1.50

3434-3439 PB L 73378 — These frames are missing.

3440-3446 PB L 73378 — Retesting of the static and dynamic values of "Silumin" bars. By Schultze. Feb 28, 1935. In German. 1.50

3447-3454 PB L 73378 — These frames are missing.

3455-3462 PB L 73378 — Creep tests with magnesium-aluminum (AZ 855) alloys at 120° C. By Vosskühler. Feb 12, 1935. In German. 1.50

3463-3464 PB L 73378 — These frames are perforated.

3465-3466 PB L 73378 — A method of cleaning the surfaces of aluminum and aluminum alloys. By Vosskühler. Feb 11, 1935. In German. 1.50

3467-3469 PB L 73378 — These frames are perforated.

3470-3472 PB L 73378 — Light metal castings impervious to excess pressure. By Spitaler. Feb 2, 1935. In German. 1.50

3473-3478 PB L 73378 — Strength tests with the magnesium-aluminum alloy (A 9 v). By Spitaler. Jan 23, 1935. In German. 1.50

3479-3498 PB L 73378 — Tempering phenomena in aluminum magnesium alloys (Hydronalium). By Siebel. n.d. In German. 2.00

3499-3504 PB L 73378 — Stress corrosion of aluminum magnesium (Hy9) tubes. By Siebel. Jul 24, 1936. In German. 1.50

3505-3510 PB L 73378 — These frames are perforated.

3511-3514 PB L 73378 — Surface protection of magnesium or magnesium alloys by glazing. By Kröner. Jun 12, 1936. In German. 1.50

3515-3523 PB L 73378 — These frames are missing.

3524-3528 PB L 73378 — Determination of the impact value of aluminum magnesium and magnesium-aluminum alloys. By Spitaler. May 29, 1936. In German. 1.50

3529-3530 PB L 73378 — The influence of the homogenizing temperature on the intercrystalline corrosion of aluminum magnesium (Hy 9) sheet. By Vosskühler. Jun 2, 1936. In German. 1.50

3531-3535 PB L 73378 — The influence of different heterogenizing temperatures on the corrosion of the aluminum magnesium alloy (Hy 9). By Vosskühler. Jun 2, 1936. In German. 1.50

3536-3538 PB L 73378 — The influence of different homogenizing times on the corrosion of aluminum-magnesium sheets. By Vosskühler. Jun 2, 1936. In German. 1.50

3539-3544 PB L 73378 — Examinations of aluminum-magnesium rivet alloys. By Siebel. May 19, 1936. In German. 1.50

3548-3551 PB L 73378 — Corrosion behavior of aluminum-magnesium sheets. By Vosskühler. May 18, 1936. In German. 1.50

3552-3553 PB L 73378 — Influence of iron on the intercrystalline corrosion of aluminum-magnesium alloy (Hy 9). By Vosskühler. May 18, 1936. In German. 1.50

3554-3555 PB L 73378 — These frames are missing.

3556-3557 PB L 73378 — Corrosion behavior of aluminum-copper sheet (Igedur). By Vosskühler. May 16, 1936. In German. 1.50

3558-3562 PB L 73378 — The fatigue bending limit of the magnesium-aluminum alloy (AZG) at elevated temperatures. By Buchmann. Mar 2, 1936. In German. 1.50

3563-3574 PB L 73378 — These frames are missing.

3575-3586 PB L 73378 — The most favorable heat-treatment of forged magnesium-aluminum alloy (AZ 855) in order to obtain a high creep resistance. By Vosskühler. Aug 17, 1936. In German. 1.50

3587-3598 PB L 73378 — These frames are missing.

3599-3603 PB L 73378 — These frames are perforated.

3604-3608 PB L 73378 — Comparative corrosion experiments with pure aluminum sheets aluminum-copper clad sheets (Duralplat) and aluminum magnesium Hy 9) sheets. By Siebel. Aug 10, 1936. In German. 1.50

3609-3613 PB L 73378 — The fatigue limit of magnesium-aluminum (AM 503) at -57° C. By Buchmann. Aug 7, 1936. In German. 1.50

3614-3673 PB L 73378 — These frames are missing.

3674-3683 PB L 73378 — The tendency toward porosity in magnesium-aluminum-zinc cast

alloys (electron castings). By Buchmann. Sep 25, 1936. In German. 1.50

3684-3685 PB L 73378 — The fatigue bending strength of chill castings. By Buchmann. Feb 24, 1937. In German. 1.50

3686-3693 PB L 73378 — Transverse strength of pressed bars of different light metal alloys. Jan 27, 1937. In German. 1.50

3694-3698 PB L 73378 — These frames are missing.

3699-3702 PB L 73378 — Fatigue bending strength of chill castings of aluminum-magnesium (Hydronalium). By Buchmann. Sep 1, 1936. In German. 1.50

3703-3714 PB L 73378 — These frames are missing.

3715-3717 PB L 73378 — Examination of aluminum-magnesium rivets. By Vosskühler. Nov 24, 1936. In German. 1.50

3718 PB L 73378 — This frame is missing.

3719-3723 PB L 73378 — The influence of surface defects on the fatigue strength of aluminum-copper (Igedur) tubes. By Buchmann. Dec 30, 1936. In German. 1.50

3724-3734 PB L 73378 — Corrosion of aluminum-magnesium (Hydronalium) by artificial sea-water and natural sea-water. By Vosskühler. 1936. In German. 1.50

3735-3742 PB L 73378 — Examinations on strength and corrosion of aluminum-magnesium-zinc alloys. By Vosskühler. Jan 8, 1943. In German. 1.50

3743-3746 PB L 73378 — Rolling experiments with aluminum-copper (Igedur) sheets. By Vosskühler. Jan 8, 1943. In German. 1.50

3747-3756 PB L 73378 — Extrusion rate and strength values after preliminary shaping. By Romeling. Jan 6, 1943. In German. 1.50

3757-3760 PB L 73378 — Die-casting experiments with aluminum-copper-silicon alloy scrap. By Heydrich. Dec 31, 1942. In German. 1.50

3761-3777 PB L 73378 — Experiments with aluminum-magnesium-zinc alloys. By K. E. Mann and others. Jan 18, 1943. In German. 2.00

3778-3801 PB L 73378 — Ingot casting of aluminum-magnesium-zinc alloy (Hy 43). By K.E. Mann. Dec 29, 1942. In German. 2.50

3802-3815 PB L 73378 — Experiments with aluminum-magnesium-zinc alloys (Hy 43). By Petry. Feb 2, 1943. In German. 1.50

3816-3829 PB L 73378 — Experiments with aluminum-magnesium-zinc alloys (Hy 43). By Petry. Feb 24, 1943. In German. 1.50

3830-3835 PB L 73378 — Detoxication of waste solutions and waste waters containing dichromate. By E. Nachtigall. Feb 15, 1943. In German. 1.50

3836-3839 PB L 73378 — The fatigue limit of a strong extruded bar of an aluminum-copper alloy (Igedur). By W. Buchmann. Feb 17, 1943. In German. 1.50

3840-3846 PB L 73378 — Synthetic emulsifiers for light metal working. By Nachtigall. Feb 4, 1943. In German. 1.50

3847-3852 PB L 73378 — Fatigue limit of extruded bars of aluminum-copper alloy (Igedur 26 P). By Buchmann. Jan 30, 1943. In German. 1.50

3853-3860 PB L 73378 — The momentary stress strength and the endurance limit of extruded bars from aluminum-copper alloy (3125.4). By Buchmann. Jan 27, 1943. In German. 1.50

3861-3869 PB L 73378 — Forging tests with blackened master material. By W. Rosenkranz. Jan 22, 1943. In German. 1.50

3870-3877 PB L 73378 — The dichromate pickling method for magnesium-aluminum alloys (elektron) according to DRP (German patent) 723 720. By Nachtigall. Jan 20, 1943. In German. 1.50

3878-3929 PB L 73378 — The weights of steel spars and light metal spars constructed for air frame production. By M. Schönberg and E.J. de Ridder. Jan 19, 1942. In German. 5.50

3930-3951 PB L 73378 — The influence of admixtures of copper and iron on the corrosion quality of chill castings of aluminum-magnesium-zinc alloys (Hy 51, Hy 511, Hy 51.12). By Siebel and Petry. Mar 26, 1942. In German. 2.50

3952-3959 PB L 73378 — The suitability of the aluminum-copper alloy (IG 30) for rivet material. By Mannchen. Feb 17, 1942. In German. 1.50

3960-3965 PB L 73378 — Examinations on aluminum-magnesium-zinc alloys. By Vosskühler. Jan 26, 1942. In German. 1.50

3966-3974 PB L 73378 — The development of the magnesium-aluminum (Electron) bicycle frame. By K. Renner. Jan 31, 1942. In German. 1.50

3975-3979 PB L 73378 — Hot pressing of aluminum-magnesium-zinc rivets (Hy-). By Hering. Jan 31, 1942. In German. 1.50

3980-3982 PB L 73378 — Segregations in aluminum-copper (Igedur) ingots. By K. E. Mann. Mar 10, 1941. In German. 1.50

3983-3989 PB L 73378 — Influence of organic and inorganic substances on the strength properties of magnesium-aluminum (electron) castings. By Siebel. Mar 5, 1942. In German. 1.50

3990-3994 PB L 73378 — The fatigue strength of spar flange profiles of aluminum-copper (Igedur) and aluminum-magnesium-zinc (Hy 43). By Buchmann. Feb 28, 1942. In German. 1.50

3995-3997 PB L 73378 — The alternating bending stress strength of spar flange profiles of aluminum-copper (Igedur) and aluminum-magnesium-zinc (Hy 43). By Buchmann. Jun 16, 1942. In German. 1.50

3998-4001 PB L 73378 — The high-temperature stability of aluminum-magnesium wrought alloys. By Vosskühler. Feb 21, 1942. In German. 1.50

PB L 73378-S. I.G. FARBENINDUSTRIE A.G., BITTERFELD, GERMANY. Aluminum alloys and magnesium alloys. (FIAT Microfilm Reel CC 147, Frames 3351-4001, abstract cards) 1935-1942. 78 p. Price: Microfilm-$2.00 - Photostat-$6.00
Brief abstracts of the individual items on the above reel CC 147, PB 73378, prepared by FIAT personnel in Germany.

PB L 73313. I.G. FARBENINDUSTRIE A.G., BITTERFELD, GERMANY. Iron alloys and steel alloys. (FIAT Microfilm Reel BB 189, Frames 3209-3566) 1930-1942. 358 f. Price: Microfilm-$4.50 - Enlargement Print-$36.00
This reel was prepared by FIAT investigators in Germany. 22 individual items are listed below and will be available as enlargement prints. The entire reel may be purchased as a microfilm for $4.50. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
3209-3216 PB L 73313	Silicothermic manufacture of low-carbon ferromolybdenum. By Schneider. Jun 12, 1937. In German.	$1.50
3217-3259 PB L 73313	Production of ferrochromium with a low-carbon content. By Schneider. Jun 12, 1937. In German.	4.50
3260-3273 PB L 73313	Production of titanium carbide with low graphite content. By Meyer. Jun 24, 1937. In German.	1.50
3274-3297 PB L 73313	Production of vanadic acid from lead vanadate. By Schneider. Aug 17, 1938. In German.	2.50
3298-3324 PB L 73313	Production of ferrotitanium having approximately 40% titanium. By Schneider. May 25, 34, and Oct 13, 35. In German.	3.00
3325-3338 PB L 73313	Manufacture of technical tungsten carbide. By Schneider. May 15, 1935. In German.	1.50
3339-3347 PB L 73313	Production of calcium-aluminum-titanium alloys. By Meyer. Aug 2, 1935. In German.	1.50
3348-3404 PB L 73313	Melting of magnetite in the high-frequency induction furnace. By Schneider and Haeuerling. Oct 11, 1932. In German.	6.00
3405-3422 PB L 73313	Manufacture of electrolytic chromium from chromic acid solutions. By Schneider. Feb 6, 1933. In German.	2.00
3423-3436 PB L 73313	Manufacture of ferrovanadium by reducing the vanadic acid in the high-frequency induction furnace. By Schneider. Mar 30, 1933. In German.	1.50
3437-3455 PB L 73313	Influence of zinc oxide and nickel oxide on the current yield and energy demand in the electrolytic separation of chromium metal. By Schneider. Feb 6, 1933. In German.	2.00
3456-3469 PB L 73313	Electrolytic production of cadmium sponge and manufacture of cadmium-iron sintered alloys. By Schneider. Aug 4, 1932. In German.	1.50
3470-3483 PB L 73313	Structure of "Fluxmel" layers. By Marx. Mar 29, 1944. In German.	1.50
3484-3495 PB L 73313	The compactness and the electric conductivity of incandescent ash containing anthracite. By Weitendorf. Feb 22, 1943. In German.	1.50
3496-3501 PB L 73313	Measurement of heat conductivity values in "elektron" dust. By Kahler. Dec 1, 1943. In German.	1.50
3502-3537 PB L 73313	The preparation of close-grained raw materials for the furnace charge. By Rantlin. Jun 1, 1943. In German.	4.00
3538-3548 PB L 73313	Supermicroscopic investigation on polyvinyl chloride. II. By Marx and others. Feb 6, 1943. In German.	1.50
3549-3553 PB L 73313	Production of fluorine from the nitric acid solution of decomposed kolaphosphate. By Marx. Mar 30, 1942. In German.	1.50
3554-3560 PB L 73313	The separation of sulfur from gases, especially from carbon oxysulfide By Weitendorf. Aug 19, 1943. In German.	1.50
3561-3563 PB L 73313	Sintering of technical molybdenum. By Pokorny. Apr 2, 1930. In German.	1.50
3564-3566 PB L 73313	Tests to concentrate technical molybdenum metal by grinding. By Pokorny. Mar 20, 1930. In German.	1.50

PB L 73313-S. I.G. FARBENINDUSTRIE A.G., BITTERFELD, GERMANY. Iron alloys and steel alloys. (FIAT Microfilm Reel BB 189, Frames 3209-3566, abstract cards) 1930-1942. 37 p. Price: Microfilm-$1.00 - Photostat-$3.00
Brief abstracts of the individual items on the above reel, BB 189, PB 73313, prepared by FIAT personnel in Germany.

PB L 70446. I.G. FARBENINDUSTRIE A.G., BITTERFELD, GERMANY. Light metals in particular magnesium and magnesium alloys. (FIAT Microfilm Reel BB 210, Frames 5060-5600) 1939-1940. 550 f. Price: Microfilm-$6.00 - Enlargement Print-$55.00
This reel was prepared by FIAT investigators in Germany. 34 individual items are listed below and will be available as enlargement prints. The entire reel may be purchased as a microfilm for $6.00. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
5060-5063 PB L 70446	Thermal production of magnesium-aluminum alloys. By Seliger. Aug 2, 1939. In German.	$1.50
5064-5089 PB L 70446	Dressing and round kiln burning in a thermal magnesium plant. By Gruetzner and Marx (?). Sep 9, 1939. In German.	3.00
5090-5112 PB L 70446	Decomposition of chromium ore by means of chlorine. By Gruetzner. Aug 24, 1939. In German.	2.50
5113-5122 PB L 70446	Experiments to produce zirconium-magnesium-zinc-alloys in the ingot	

foundry at Bitterfeld. By v. Zeppelin. Sep 25, 1939. In German. 1.50

5135-5136 PB L 70446 — Measurement of the characteristics of the thermal diffusivity and thermal conductivity of mixtures of dolomite and ferro-silicon. By Dietrich. Sep 28, 1939. In German. 1.50

5137-5162 PB L 70446 — Utilization of light metal scrap by the distillation method. By Seliger. Nov 9, 1939. In German. 3.00

5163-5174 PB L 70446 — Recovery of magnesium from the tapping sludge of thermal magnesium production. By Dietrich. Dec 15, 1939. In German. 1.50

5175-5223 PB L 70446 — Experiments made to explain the reduction loss of briquettes made from 2 CaO.2MgO + Si. By Dietrich. Mar 12, 1940. In German. 5.00

5224-5246 PB L 70446 — Thermal production of calcium and strontium. By Seliger. Mar 14, 1940. In German. 2.50

5247-5259 PB L 70446 — Experiments for processing magnesium tapping sludge by a wet process. By Straschill. Mar 29, 1940. In German. 1.50

5260-5264 PB L 70446 — Addition of carbon to the reaction mixture for the thermal production of magnesium. By Denk. Apr 18, 1940. In German. 1.50

5265-5276 PB L 70446 — Report on experiments with the twin autoclave for the production of compressed oxygen according to the manganese-method. By Hlech. May 21, 1940. In German. 1.50

5277-5289 PB L 70446 — Report on an experiment for recalcining quicklime. By Hlech. Jun 6, 1940. In German. 1.50

5290-5296 PB L 70446 — The existence of sodium silicophosphates. By Meraviets. Jun 17, 1940. In German. 1.50

5297-5305 PB L 70446 — Process to improve anodically produced protective coatings on magnesium and magnesium alloys according to USA patent No. 2 138 023. By Straschill. Jun 22, 1940. In German. 1.50

5306-5315 PB L 70446 — Experiments for producing protective coatings on magnesium and magnesium alloys according to the Swiss patent No. 198 158. By Straschill. Jun 24, 1940. In German. 1.50

5316-5324 PB L 70446 — Investigation of the salt bath 2/24 of the "Leipziger Leichtmetallwerke in Rackwitz" after an operating period of 33 months and 15 days. By Michel. Jun 26, 1940. In German. 1.50

5325-5349 PB L 70446 — Reaction of manogen cartridges at extreme temperatures. By Hlech. Jul 16, 1940. In German. 2.50

5350-5376 PB L 70446 — Aluminium made by distillation from aluminium alloys. State of experiments on Jul 20, 1940. By Schulze. Jul 24, 1940. In German. 3.00

5377-5394 PB L 70446 — The influence of various additions to the reaction mixture: (Thermal production of magnesium). By Denk. Jul 31, 1940. In German. 1.50

5395-5403 PB L 70446 — Report on experiments with a twin autoclave for producing compressed oxygen according to the manganese method. By Hlech. Aug 2, 1940. In German. 1.50

5404-5413 PB L 70446 — Experiments for producing protective layers on magnesium and its alloys according to the French patent No. 836 207. By Straschill. Aug 16, 1940. In German. 1.50

5414-5420 PB L 70446 — Experiments for the production of protective coatings on magnesium and its alloys according to U.S. patent No. 2 138 794. By Straschill. Aug 17, 1940. In German. 1.50

5421-5428 PB L 70446 — The destruction of magnesite bricks in the rotary furnace of the thermal magnesium plant. By Marx. Aug 20, 1940. In German. 1.50

5429-5441 PB L 70446 — The attack on materials in mixtures from monovalent alcohols and water. Part I. By Michel. Aug 27, 1940. In German. 2.50

5442-5451 PB L 70446 — Experiments to check the French patent No 830 839. "Method for producing layers on magnesium and magnesium alloys". By Straschill. Aug 30, 1940. In German. 1.50

5452-5462 PB L 70446 — Experiments for producing protective layers on magnesium and magnesium alloys according to the British patent No. 491 025. By Straschill. Aug 29, 1940. In German. 1.50

5463-5486 PB L 70446 — Experiments concerning the brick-lining of reaction furnace No. 7. By Dietrich. Aug 29, 1940. In German. 2.50

5487-5514 PB L 70446 — Cooling of furnace products during the carbothermal production of magnesium. By von Kahler. Sep 4, 1940. In German. 3.00

5515-5531 PB L 70446 — Experiments to produce protective coatings on magnesium and magnesium alloys according to the French patent No 831 595. "Testing the protective coatings for corrosion resistance. By Straschill. Sep 6, 1940. In German. 2.00

5532-5544 PB L 70446 — Experiments on the influence of high frequency currents on the direct current processes. By Hoelemann. Oct 19, 1940. In German. 1.50

5545-5558 PB L 70446 — Investigations on the condensation of magnesium vapor and on the reaction velocity in the thermal production of magnesium. By Denk. Sep 10, 1940. In German. 1.50

5559-5574 PB L 70446 — Experiments concerning the production of protective coatings on "elektron" sheets with silicon tetrafluoride. By Straschill. Sep 17, 1940. In German. 2.00

5575-5600 PB L 70446 — Corrosion protection of magnesium and its alloys by means of selenium silicofluoride solutions according to a Japanese patent application: Inventor K. Saeki, Tokio. Patent sheet 1813. By Straschill. Sep 17, 1940. In German. 3.00

PB L 70446-S. I.G. FARBENINDUSTRIE A.G., BITTERFELD, GERMANY. Light metals in particular magnesium and magnesium alloys. (FIAT Microfilm Reel BB 210, Frames 505-5600, abstract cards) 1939-1940.

56 p. Price: Microfilm-$2.00 - Photostat-$4.00
Brief abstracts of the individual items on the above reel BB 210, PB 70446, prepared by FIAT personnel in Germany.

PB L 82231. I. G. FARBENINDUSTRIE A. G., BITTERFELD, GERMANY. Report on development work concerning cerium-containing magnesium cast-alloys. (BIOS Microfilm Reel F.D. 1417/46 (B.O. 622/46), Frames 1-28) Feb 1940.
28 f. Price: Microfilm-$1.50 - Enlargement print-$4.00
The report No. 21 deals with the pronounced refining influence of the addition of cerium to Mg-Knetlegierungen (magnesium wrought alloys) as regards the re-crystallization and cast structure, and the refinement of the grain. Author: G. Siebel. Test results are shown by tables of figures. The influence of the Fe and Si content on the structure of the cast material is likewise discussed. A further table of figures shows the results of the Budiometer-test for determination of the corrosive resistance. A subsequent chapter reviews the heat treatment of Mg-Zn-Ce alloys. The tests are illustrated by seven tables of figures, 15 sheets of curves, X-ray photographs, etc. In German.

PB L 73837. I.G. FARBENINDUSTRIE A.G., BITTERFELD, GERMANY. Various metallurgical reports. (FIAT Microfilm Reel BB 207, Frames 3765-4162) 1935-1936.
397 f. Price: Microfilm-$4.75 - Enlargement Print-$40.00
This reel was prepared by FIAT investigators in Germany. 27 individual items are listed below and will be available as enlargement prints. The entire reel may be purchased as a microfilm for $4.75. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
3765-3772 PB L 73837	Decomposition in salt melting baths of bichromate mixtures. Process for stabilizing thermal refining baths. By Michel. Aug 5, 1935. In German.	$1.50
3773-3778 PB L 73837	Examinations of various aluminum bronzes. By Neukirch. Aug 15, 1935. In German.	1.50
3779-3790 PB L 73837	The production of a citrate soluble phosphoric acid fertilizer. By Gundelach. Aug 30, 1935. In German.	1.50
3791-3796 PB L 73837	The behavior of soda-or dicalcium phosphate mixtures with materials containing lime. By Gundelach. Aug 30, 1935. In German.	1.50
3797-3841 PB L 73837	Production of dicalcium orthophosphate by hydrolysis. By Gundelach. Aug 30, 1935. In German.	4.50
3842-3853 PB L 73837	The temperature measurement in chlorination furnaces. By Michel. Sep 9, 1935. In German.	1.50
3854-3860 PB L 73837	Diffusion phenomenon of a crucible furnace operated with hydrogen at 1400°C. By Grittner. Sep 17, 1935. In German.	1.50
3861-3873 PB L 73837	Decomposition in bichromate salt melting baths. By Michel. Oct 24, 1935. In German.	1.50
3874-3886 PB L 73837	Use of alkali bichromate, alkali chlorate and alkali perchlorate mixture as protection against boiler scale and corrosion. By Michel. Oct 29, 1935. In German.	1.50
3887-3892 PB L 73837	Processing red mud free from lime to produce red iron oxide pigment. By Marx. Nov 11, 1935. In German.	1.50
3893-3908 PB L 73837	Production of alkali vanadate by chlorinating roasting of vanadium containing pig iron slags. By Marx. Nov 22, 1935. In German.	2.00
3909-3913 PB L 73837	Electrolytic concentration of heavy water. By Neukirch. Dec 17, 1935. In German.	1.50
3914-3943 PB L 73837	The heat of reaction of the chlorination of oxychloride and molded articles. By Pollack. Dec 27, 1935. In German.	3.00
3944-3960 PB L 73837	Conversion of the Aken and Bitterfeld plants to the production of magnesium oxychloride. By Schmid and Wiesert. Nov 29, 1935. In German.	2.00
3961-3970 PB L 73837	Coking of oxychloride briquettes in Stassfurt. By Wiesert. Jan 9, 1936. In German.	1.50
3971-3981 PB L 73837	Protection of the graphite anodes in magnesium baths. By Wiesert. Feb 3, 1936. In German.	1.50
3982-3989 PB L 73837	"Elektrax" corrosion in cooling liquids. (Fluoride protection). By Michel. Feb 4, 1936. In German.	1.50
3990-4041 PB L 73837	Heat of reaction, heat economy, and course of reaction in the chlorination to $MgCl_2$. By Wiesert. Mar 3, 1936. In German.	5.50
4042-4054 PB L 73837	Production of magnesium sulfate from serpentine. By v. Zeppelin. Mar 4, 1936. In German.	1.50
4055-4073 PB L 73837	Production of magnesium bichromate. By Neukirch and Marx. Feb 28, 1936. In German.	2.00
4074-4086 PB L 73837	Use of alkali bichromate, alkali monochromate, alkali chlorate, and alkali perchlorate mixtures as protection against boiler scale and corrosion. By Michel. Mar 11, 1936. In German.	1.50
4087-4096 PB L 73837	Report on the present state of the research work concerning "Magnogen". By Hlech. Mar 12, 1936. In German.	1.50
4097-4105 PB L 73837	Chemism of the thermal production of magnesium from calcined dolomite and silicon. By Schulze. Mar 25, 1936. In German.	1.50
4106-4123 PB L 73837	Investigations on the consumption speeds and possibilities of explosion in the systems Al-Cr_2O_3-$KClO_3$ and Al-Cr_2O_3-$KClO_4$. By Neukirch. Mar 25, 1936. In German.	2.00
4124-4162 PB L 73837	Investigations on the consumption speeds and possibilities of explosion in the system corresponding to the ferro-molybdenum-, ferro-tungsten-, and ferro-titanium batches. By Neukrich. Apr 22, 1936. In German.	4.00

PB L 73837-S. I.G. FARBENINDUSTRIE A.G., BITTERFELD, GERMANY. Various metallurgical reports. (FIAT Microfilm Reel BB 207, Frames 3765-4162, abstract cards) 1935-1936. 42 p. Price: Microfilm-$1.00 - Photostat-$3.00
Brief abstracts of the individual items on the above reel, BB 207, PB 73837, prepared by FIAT personnel in Germany.

PB L 74786. I. G. FARBENINDUSTRIE A. G., LEVERKUSEN, GERMANY. Dissertation on titanium. (FIAT Microfilm Reel H 89, Frames 1-257) 1933. 257 f. Price: Microfilm-$6.00 - Enlargement print-$26.00

This reel contains a dissertation submitted to the College of Engineering, Berlin, toward a doctorate in engineering. A discussion of the history and chemical properties of titanium is followed by a study of its industrial and economic importance in the chemical industry and in ferrous and nonferrous metallurgy. Part II describes the author's experiment in the melting of TiO_2 and TiO_2 mixtures, in the behavior of TiO_2 in the presence of C and CO, and with Na_2O-TiO_2, TiO_3-TiO_2, FeO_2-TiO_2, and MgO-Ti_2O_3-TiO_2 systems. An extensive bibliography, data tables, and graphs are included. In German.

PB L 73924. INSTITUT FÜR EDELMETALLFORSCHUNG. SCHWÄB.-GMÜND, GERMANY. Research reports on nickel, cadmium, chromium, and silver plating, etc. (FIAT Microfilm Reel A-59, Frames 1-624) 1939-1946. 564 f. Price: Microfilm-$6.00 - Enlargement print-$56.50

This reel contains 44 reports from the Research Institute for Noble Metals, including reprints from technical publications and several aeronautical research reports on protective coatings, nickel, chromium, silver, steel plating, etc., electrolytic polishing, crystallization, etc. The individual reports are listed below, and will be available as enlargement prints only; the entire reel may be purchased in microfilm form for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

Frames	Title	Price
1-2 PB L 73924	List of research reports from the Institute. 1939-1942. In German.	$1.50
3-11 PB L 73924	Behavior of precious metals and their copper-bearing alloys in the presence of oxygen, while in the fluid state and during annealing in the solid state. By E. Raub and M. Engel. Jun 1939. In German.	1.50
12-16 PB L 73924	Action of cadmium and arsenic in nickel baths (including 3 pages of miscellaneous material). By M. Wittum. Jun 1939. In German.	1.50
17-25 PB L 73924	Protective metallic coatings. By E. Raub. Aug 1939. In German.	1.50
25-31 PB L 73924	Corrosion prevention in magnesium and its alloys. (I) By B. Wullhorst. Aug 1939. In German.	1.50
32-41 PB L 73924	Oxide finishing layers on silver to prevent tarnishing. By E. Raub and M. Engel. Feb 1940. In German.	1.50
42-50 PB L 73924	Corrosion prevention in magnesium and its alloys. (II) By B. Wullhorst. Jul 1940. In German.	1.50
51-61 PB L 73924	Analysis of cyanide content in galvanic baths. By E. Raub. Mar 1941. In German.	1.50
61-65 PB L 73924	Powder metallurgy (precious metals). By M. Engel. Mar 1941. In German.	1.50
66-73 PB L 73924	Electrolytic polishing of zinc, cadmium and silver in cyanide solutions. By E. Raub and B. Wullhorst. Nov 1941. In German.	1.50
73-77 PB L 73924	Silver-plating of zinc and its alloys. By M. Engel and K. Lieb. Nov 1941. In German.	1.50
77-78 PB L 73924	X-ray investigations of electrolytic layers on pure magnesium produced in alkali fluoride solutions and soda lye. By B. Wullhorst and A. v. Polaczek-Witteck. Nov 1941. In German.	1.50
79-84 PB L 73924	Effect of polishing on the surface hardness of silver. By E. Raub. Dec 1942. In German.	1.50
85-93 PB L 73924	Electrolytic polishing. By B. Wullhorst. Dec 1942. In German.	1.50
94-99 PB L 73924	Surface protection for zinc and its alloys. By E. Raub and M. Wittum. Aug 1939. In German.	1.50
100-103 PB L 73924	Reflection measurements on binary and ternary alloys of silver with beryllium, aluminum, and silicon. By E. Raub and M. Engel. Nov 1939. In German.	1.50
104-110 PB L 73924	Effect of organic compounds on galvanic nickel plate (reprint from "Zeitschrift für Elektrochemie," 46 (1940)). By E. Raub and M. Wittum. n.d. In German.	1.50
111-115 PB L 73924	Etching of platinum and its alloys by A.C. electrolysis (reprint from "Zeitschrift für Elektrochemie," 46 (1940)). By E. Raub and G. Buss. n.d. In German.	1.50
116-118 PB L 73924	Corrosion of zinc and chrome-plated iron (reprint from "Zeitschrift für Metallkunde," 32 (1940)). By E. Raub. n.d. In German.	1.50
119-135 PB L 73924	Chromium-plated automotive accessories (reprint from "Deutsche Kraftfahrtforschung" 1940). By E. Raub and others. 1940. In German.	2.00
136-138 PB L 73924	Hard chromium plating of aluminum alloys (reprint from "Zeitschrift für Metallkunde," 33 (1941)). By E. Raub. n.d. In German.	1.50
139-144 PB L 73924	Tarnishing of silver-copper alloys (reprint from "Zeitschrift für Metallkunde," 34 (1942)). By E. Raub and A.v. Polaczek-Wittek. n.d. In German.	1.50
145-146 PB L 73924	Solubility of lead in silver between 300-900° (reprint from "Zeitschrift für Metallkunde," 34 (1942)). By E. Raub and A.v. Polaczek-Wittek. n.d. In German.	1.50
147-152 PB L 73924	Electrolytic polishing (reprint from "Zeitschrift für Elektrochemie," 48 (1942)). By E. Raub and B. Wullhorst. n.d. In Germar.	1.50
153-156 PB L 73924	Alloys of thorium with copper, silver and gold (reprint from "Zeitschrift für Elektrochemie," 49 (1943)). By E. Raub and M. Engel. n.d. In German.	1.50
157-165 PB L 73924	Composition of electroplated alloy precipitates (silver-lead and copper-zinc alloys) (reprint from "Zeitschrift für Elektrochemie," 49 (1943) and 50 (1944)). By E. Raub and A. Engel. n.d. In German.	1.50
166-227 PB L 73924	Tarnish-proof resistance materials (silver-platinum and	

mixed crystal gold alloys). Mar 1945. In German. 6.50

228-287 PB L 73924 Duplicate of frames 166-227.

288-303 PB L 73924 Dip soldering of aluminum. (Same as PB 36637, vol. 3, p. 416). By B. Wullhorst. Feb 1941. In German. 2.00

304-332 PB L 73924 Preparation and properties of galvanic silver-lead alloys with regard to their application as bearing metals (same as PB 36642, vol. 3, p. 656). By E. Raub and others. Aug 1942. In German. 3.00

333-364 PB L 73924 Effect of hard chromium plating on the fatigue strength of Al-alloys. Jan 1945. In German. 3.50

365-378 PB L 73924 Stress-corrosion in precious metal alloys. By E. Raub. Mar 1944. In German. 1.50

379-397 PB L 73924 Galvanic steel plating of aluminum. By E. Raub. Jul 1944. In German. 2.00

398-454 PB L 73924 Gold-nickel-copper ternary system. By E. Raub and A. Engel. May 1946. In German. 6.00

455-468 PB L 73924 Self-igniting alloys (silver-thorium, gold-thorium, copper-thorium). By E. Raub and M. Engel. n.d. In German. 1.50

469-496 PB L 73924 Hardenable gold alloys of low platinum content or free of platinum for rayon and cellulose fiber spinning nozzles. Jan 1944. In German. 3.00

497-506 PB L 73924 Hardenable gold-platinum alloys. Dec 1944. In German. 1.50

507-530 PB L 73924 Metal migration in take-off contacts of base metal-containing gold alloys. By E. Raub. 1943. In German. 2.50

531-533 PB L 73924 Silver-manganese alloys (reprint from "Metallforschung, Nos. 1 and 2, 1946). By E. Raub and A. Engel. n.d. In German. 1.50

534-535 PB L 73924 Plated precious metal contacts (reprint from "Metallforschung" No. 3, 1946). By E. Raub. n.d. In German. 1.50

536-539 PB L 73924 Recurrent saturation curves in the precipitation of crystalline solid solutions from melts (solubility of thallium, lead, and bismuth, in copper, silver, and gold) (reprint from "Metallforschung" No. 3 (1946)). By E. Raub and A. Engel. n.d. In German. 1.50

540-546 PB L 73924 Solubility of cadmium in copper (300-1000°). By E. Raub. n.d. In German. 1.50

547-586 PB L 73924 Expansion measurements of binary crystalline solid solutions with recurrent solubility curve and of metals with powerful lattice distortion. By E. Raub and K. Wolff. n.d. In German. 4.00

587-624 PB L 73924 Properties and phase diagram of electroplated copper and silver with a high content of nonmetallic foreign matter. By E. Raub. n.d. In German. 4.00

PB L 74666. KRUPP, FRIEDRICH, A.G., ESSEN, GERMANY. Research reports on steels, welding electrodes, aluminum alloys, etc. (FIAT Microfilm Reel L-60, Frames 3777-4198) 1935-1944. 421 f. Price: Microfilm-$5.00 - Enlargement Print-$42.50

This reel contains 50 reports from the Krupp research laboratories, on various types of steels, including electrodes and on aluminum alloys, bronze, etc. The individual reports are listed below, and will be available as enlargement prints only. The entire reel may be purchased in microfilm form for $5.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

Frames	Title	Price
3777-3785 PB L 74666	Damascus steel blades from Solingen. n.d. In German.	$1.50
3786-3793 PB L 74666	Results of tests in the production of Damascus carbide steel. Aug 1939. In German.	1.50
3794-3802 PB L 74666	Investigation of Oriental Damascus steel blades. Aug 1939. In German.	1.50
3803-3803A PB L 74666	Damascus steel saber blades. Jul 1940. In German.	1.50
3804-3805 PB L 74666	Smelting Damascus steel. Aug 1942. In German.	1.50
3806-3822 PB L 74666	Investigation of Wipla stainless steel dental pins manufactured by Wienand Söhne & Co., G.m.b.H., Sprendlingen. Mar 1944. In German.	2.00
3823-3830 PB L 74666	Fusion welding of steels containing 17-20% Cr. May 1937. In German.	1.50
3831-3872 PB L 74666	Oxyacetylene and arc welding of FF25, FF28, and FF30 steels. 1936. In German.	4.50
3873-3875 PB L 74666	Welding tests of 23% and 30% chrome steels. May 1937. In German.	1.50
3876-3900 PB L 74666	Welding tests of FFE28 steel. 1937-1938. In German.	2.50
3901-3905 PB L 74666	FFE28 electrodes (metallography). Nov 1938. In German.	1.50
3906-3908 PB L 74666	FFE28 electrodes for oxyacetylene welding. Dec 1938. In German.	1.50
3909-3912 PB L 74666	Investigation of FM442 and V5M samples welded with EFK2338 and CVM special electrodes. May 1943. In German.	1.50
3913-3924 PB L 74666	V17F bend test specimens containing various admixtures. Jul 1936. In German.	1.50
3925-3935 PB L 74666	Welding tests of V17F and VE17F with and without heat treatment after welding. Oct 1936. In German.	1.50
3936-3940 PB L 74666	EV-alloyed V16A and V14A sheathed Zeus welding rods. Sep 1937. In German.	1.50
3941-3946 PB L 74666	Oxyacetylene weldability of various SV4AP melts. Nov 1938. In German.	1.50
3947-3952 PB L 74666	Use of cold-rolled stainless steel in the Aircraft industry. Jul 1939. In German.	1.50
3953-3963 PB L 74666	Electric resistance welding of V2AX electrodes melting losses. Sep 1939. In German.	1.50

3984-3983 PB L 74666 — Austenitic test electrodes for welding nonaustenitic materials. 1939-1940. In German. 2.00

3984-3987 PB L 74666 — Nb consumption in welding V2AX or other Nb containing materials. Aug 1940. In German. 1.50

3988-3990 PB L 74666 — Electrodes for welding V46A-E and V6A-E. Oct 1941. In German. 1.50

3991-3992 PB L 74666 — Use of nitrogenous stainless steels in steam and pressure vat construction. Jan 1942. In German. 1.50

3993-3995 PB L 74666 — A.C. weldable austenitic electrodes. Jul 1943. In German. 1.50

3996-4001 PB L 74666 — Welding austenitic steels with ingot steel. Sep 1942. In German. 1.50

4002-4008 PB L 74666 — Sulfur-resistant austenitic welding steel. Mar 1936. In German. 1.50

4009-4026 PB L 74666 — NCT4 electrodes (for electrical resistance welding of carbon and low-alloyed steels). Jul 1937. In German. 2.00

4027-4029 PB L 74666 — FKDM10 turbine rotor with welded "Tinidur" wheel rim. May 1942. In German. 1.50

4030-4031 PB L 74666 — Butt welding tests with "Tinidur." May 1944. In German. 1.50

4032-4048 PB L 74666 — Welding tests with P257 (CMT) electrodes. 1937-1939. In German. 2.00

4049-4053 PB L 74666 — Joint welding of austenitic manganese steel. Oct 1939. In German. 1.50

4054-4061 PB L 74666 — Electric resistance welding of CF6T24 with austenitic NCT3 and NCT5 electrodes. Jun 1937. In German. 1.50

4062-4074 PB L 74666 — Vessels and other apparatus parts for ammonia synthesis of hydrogen and heat resistant steel. Sep 1939. In German. 1.50

4075-4082 PB L 74666 — Muffles and retorts for special chemical processes. 1940-1941. In German. 1.50

4083-4090 PB L 74666 — Salt bath crucibles. 1942. In German. 1.50

4091-4093 PB L 74666 — Corrosion tests of lacquered aluminum. Dec 1938. In German. 1.50

4094-4095 PB L 74666 — Chlorine treatment of liquid alloyed Al for extraction of fluid magnesium chloride. Dec 1944. In German. 1.50

4096-4105 PB L 74666 — Systematic investigations of Borotal (graphitiferous aluminum). Aug 1939. In German. 1.50

4106-4127 PB L 74666 — Extrusion casting and production of Al alloys at the Berndorfer Metallwarenfabrik. Nov 1943. In German. 2.50

4128-4130 PB L 74666 — X-ray tests of silicon powder. Jan 1942. In German. 1.50

4131-4136 PB L 74666 — Problems in the production of Al-Zn alloys due to the shortage of pure zinc. Apr 1940. In German. 1.50

4137-4150 PB L 74666 — Low-melting alloys for mine-safety devices. Nov 1942. In German. 1.50

4151-4153 PB L 74666 — Investigations on scaling of aluminized copper. Jun 1937. In German. 1.50

4154-4157 PB L 74666 — Substitution of VA steels for Monel metal. Nov 1938. In German. 1.50

4158-4162 PB L 74666 — Cu-Ni-Ni_3S_2-Cu_2S crystal system. Apr 1941. In German. 1.50

4163-4166 PB L 74666 — Manganese-copper-nickel alloys. Jul 1942. In German. 1.50

4167-4179 PB L 74666 — Cu-Ni separation in Cu-Ni melts by treatment with Al_2S_3. Sep 1942. In German. 1.50

4180-4189 PB L 74666 — Special aluminum bronze for turnbuckles. Aug 1935. In German. 1.50

4190-4194 PB L 74666 — Difficulties in machining aluminum bronze dynamo crankshaft bushings. Aug 1938. In German. 1.50

4195-4198 PB L 74666 — Performance of bronze bearings. Oct 1941. In German. 1.50

PB L 80791. U. S. AERONAUTICAL BOARD. Bushing-type XII-J drive adapter. (Army-Navy Aeronautical Standard Drawing AN 4141). Nov 1946. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
This bushing is used when adapter flange AN4138 is provided, for converting Type XII-J drive to a type XI drive.

PB L 80792. U. S. AERONAUTICAL BOARD. Envelope-engine protective (for J-33 engine). (Army-Navy Aeronautical Standard Drawing AN 4154). Dec 1946. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 80793. U. S. AERONAUTICAL BOARD. Fittings; method of testing tube. (Army-Navy Aeronautical Specification AN-F-47). Jan 1947. 10 p. Price: Microfilm-$1.00 - Photostat-$1.00
This specification is drawn to present standard method for testing air craft hydraulic tube fittings and is prepared to cover two types of fittings, a high pressure type and a low pressure type.

PB L 80788. U. S. AERONAUTICAL BOARD. Fittings: solder type, tube. (Army-Navy Aeronautical Specification AN-F-49). May 1947. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00

*PB L 78989. U. S. FIELD INFORMATION AGENCY, TECHNICAL. Seomag processes for the production of corrosion resistant coatings on magnesium alloys. (Tech Bulletin T-23). Apr 1947. 2 p. Price: Mimeo-$0.25
A brief description is given of the "Seomag W" (alternating current process) and of "Seomag G" (direct current process). The coatings from both processes can be dyed. These electrolytic coatings have not found wide use as they are more expensive and show fewer advantages over those produced by straight chemical processes.

* PB L 81634. PASLEY, E. and others. Production of high speed and other special alloy and carbon steels in Germany and Austria. (CIOS Final Rept 1505, Item 21). Apr 1946. 157 p. Price: Microfilm-$4.75 - Photostat-$16.00
Sixteen steel plants were visited thirteen of which were located in Germany and three in Austria. A detailed report is given for each plant covering: Melting equipment; high frequency furnaces; electrical data; ingots; forges; rolling mills; intermediate mills; finishing mills; wire mills; annealing; and steel analyses, which is presented in tabular form.

*PB L 81609. SCOTT-MAXWELL, I. S. Blast furnaces in the Ruhr and at Watenstedt. (Appendix no. 4 to CIOS report XXIII-119). (CIOS File XXIII-56, Item 31). Jun 1945. 56 p. Price: Microfilm-$2.25 - Photostat-$6.00
Six blast furnace plants were visited and a report for each visit is given covering: blast furnace data, iron analysis; and slag analysis. Description is given on: material handling; material preparation; sinter; furnace construction and design; furnace equipment; furnace operation; slag disposed; and gas cleaning. Included in this report is a diagram-B.F. blower with turbine drive, a diagram-compound Tuyere, furnace dimension and twenty-four furnace diagrams and figures.

PB L 80735. SOKOLOVSKII, V. V. Elastic-plastic equilibrium of a tube made of a material with strain-hardening. (David W. Taylor Model Basin Translation RAB-22). 1947. 36 p. Price: Microfilm-$1.00 - Photostat-$3.00
This paper is concerned with the elastic-plastic equilibrium of a cylindrical tube under combined interior and exterior pressure and axial force. The discussion is based on Hencky's theory of plasticity and Schmidt's law of strain-hardening. Tables and charts are included.

* PB L 81811 - * PB L 81818. TREMBOUR, F. W. Subject index of documents microfilmed at Fr. Krupp, A. G., Essen. (FIAT Final Rept 1190, Vol. 1-8). May 1947. Paging and prices as follows:

PB	Vol.	Pages	Price: Mimeo
L 81811	1	33	$1.00
L 81812	2	42	1.25
L 81813	3	42	1.25
L 81814	4	39	1.00
L 81815	5	42	1.25
L 81816	6	40	1.00
L 81817	7	39	1.00
L 81818	8	23	0.75

This report, in eight volumes, contains a classified listing of the titles of all interesting scientific and technical documents selected and microfilmed at the various Krupp plants in Germany, as part of the FIAT program in 1946 and 1947. Whereas the collected information deals largely with the two fields of steel and sintered carbide technology, the broad interests of the Krupp concern resulted in a diversity of endeavor reaching far into related industries. This wide activity is reflected in the subject matter of the reports listed. The reports are of all kinds, from short memoranda to lengthy treatises, and total about 2500 items, about 60,000 pages of written material. The contents vary in nature from details like mere hints, through unpublished patent applications, to broad developments of general significance such as work on high speed steels, iron ore reduction processes, corrosion and oxidation resistant steels and magnetic materials. Methods and processes of manufacture and test, products and applications of hundreds of different metallic materials of interest to industry and science are referred to in these reports. To present this information in usable form, a decimal subject index has been used in which the following are the main classifications:

000	Melting and Melts	covered in	Volume I
100	Cast Bodies and Products	" "	Volume II
200	Plastic Formed Materials	" "	Volume II and III
300	Metal Joining	" "	Volume IV
400	Surface Treated and Coated Metals	" "	Volume IV and V
500	Powders and Sintered Products	" "	Volume V
600	Non-Metallic Materials	" "	Volume V and VI
700	Devices, Machines, Structures	" "	Volume VI
800	General	" "	Volume VI, VII and VIII

Each of these main classes has been divided into a maximum of 10 subclasses and each of these into a maximum of 10 further subdivisions under which the individual article titles are finally listed. Thus, items on the the use of carbide cutting tools, would be found under: 500 Powders and Sintered Products - , 510 Hard Tool Materials - , 513 Applications. For the purpose of maximum fidelity the original German titles have been retained. The microfilm reel and frame numbers according to which the papers can be identified at the Department of Commerce, Office of Technical Services are given for reference with each entry. An appendix in Volume VIII is a key to Krupp steel designations.

PB L 73502. VEREINIGTE ALUMINIUM WERKE, LAUTAWERK/LAUSITZ, GERMANY. Aluminum and aluminum alloys. (FIAT Microfilm Reel G 3, Frames 3461-5209) 1937-1944. 859 f. Price: Microfilm-$6.00 - Enlargement Print-$86.00
This reel was prepared by FIAT investigators in Germany. Individual items are listed below and will be available as enlargement prints; the entire reel may be purchased as a microfilm for $6.00. Please include PB and frame numbers when ordering individual items.
In German.

Frames	Title	Price
3461-3490 PB L 73502	Corrosion experiments with Al-Cu-Mg sheets in a spraying apparatus. In German. This item is a continuation film (frames 3456-3640), Reel G 2, PB 70191, which appeared in this Bibliography, v. 6, p. 955.	$3.00
3491-3493 PB L 73502	Corrosive effect of water, containing copper, on pure aluminum. Feb 7, 1942. In German.	1.50
3494-3498 PB L 73502	Water cooled cast ingots made of silumin by different manufacturers. Jan 29, 1942. In German.	1.50
3499-3501 PB L 73502	Remelt alloys Al-Cu-Mg. Feb 11, 1942. In German.	1.50
3502-3508 PB L 73502	Corrosive action of low copper content in purest aluminum. Jan 23, 1942. In German.	1.50
3509-3514 PB L 73502	Determination of silicon in silumin. Feb 6, 1942. In German.	1.50
3515-3521 PB L 73502	Casting defects in heavy rolled plates of pure aluminum (99.5%) cast in strands. Feb 5, 1942. In German.	1.50
3522 PB L 73502	Cast boiling-pot of Al-Cu-Mg-alloy. Feb 5, 1942. In German.	1.50
3523-3525 PB L 73502	Effect of cooling water on pure aluminum (99.8%). Feb 4, 1942. In German.	1.50
3526-3528 PB L 73502	Shrinkholes in pigs of hypoeutectic silumin-beta. Feb 4, 1942. In German.	1.50
3529-3540 PB L 73502	Resistance of aluminum and aluminum alloys to nitric acid. Feb 2, 1942. In German.	1.50

3541-3561 PB L 73502 — Melting technique and conditions of cast parts with aluminum and aluminum alloys. Jan 28, 1942. In German. 2.50

3562-3566 PB L 73502 — Solidification of red mud. Jan 7, 1942. In German. 1.50

3567-3578 PB L 73502 — Smelting of red mud. Jan 25, 1942. In German. 1.50

3579-3580 PB L 73502 — Determination of zinc in aluminum. Jan 28, 1942. In German. 1.50

3581-3586 PB L 73502 — Refinement of hypereutectic silumin gamma. Jan 20, 1942. In German. 1.50

3587-3596 PB L 73502 — Comparing corrosion tests of chemically protected Aldrey wires. Jan 23, 1942. In German. 1.50

3597-3609 PB L 73502 — Internally protected tubes of pure aluminum and purest aluminum for water-pipe lines. Jan 12, 1942. In German. 1.50

3610-3613 PB L 73502 — Surface defects in strips of aluminum alloy. Jan 10, 1942. In German. 1.50

3614-3618 PB L 73502 — Refining of high-percentage pure-aluminum. Jan 5, 1942. In German. 1.50

3619-3624 PB L 73502 — Iron absorption when melting silumin in iron crucibles covered with aluminum. Jan 16, 1942. In German. 1.50

3625-3628 PB L 73502 — Extrusion cast of E C 124 for processing without extrusion pressing process. Jan 12, 1943. In German. 1.50

3629 PB L 73502 — Samples of silumin sand-mold casting. Jan 16, 1942. In German. 1.50

3630-3639 PB L 73502 — Change of the silicon-and magnesium content of alloy L 15 111. Jan 13, 1942. In German. 1.50

3640-3647 PB L 73502 — Casting and forging experiments with E C 124. Jan 8, 1942. In German. 1.50

3648-3656 PB L 73502 — Corrosive action of permutite water and outgoing air on aluminum in spinning bath evaporating installations. Jan 6, 1942. In German. 1.50

3657-3659 PB L 73502 — Storage of sodium in air-tight aluminum tubes. Dec 30, 1941. In German. 1.50

3660-3662 PB L 73502 — Solubility of steel tubing in purest-aluminum. Dec 20, 1941. In German. 1.50

3663-3689 PB L 73502 — Influence of the degree of purity of the base-metal on alloys of the Al-Mg to 1.5% Mg type. Dec 15, 1941. In German. 3.00

3690-3694 PB L 73502 — Effect of SO_2 on aluminum in the presence of water. Dec 30, 1941. In German. 1.50

3695-3703 PB L 73502 — Strips of purest aluminum. Nov 15, 1943. In German. 1.50

3704-3727 PB L 73502 — Extraction of silica from bauxite. Jul 1942, Feb, Oct 1943. In German. 1.50

3728-3736 PB L 73502 — Production of silumin according to a new liquating process. Nov 19, 1943. In German. 1.50

3737-3754 PB L 73502 — Standard-Al-remelt-cast alloy. Nov 16, 1943. In German. 2.00

3755-3759 PB L 73502 — Remelt alloys of the silumin type. Nov 13, 1943. In German. 1.50

3760-3768 PB L 73502 — Deep-drawing strips of aluminum extrusion cast ingots. Nov 10, 1943. In German. 1.50

3769-3772 PB L 73502 — Hardness-influences of silumin-gamma. Nov 15, 1943. In German. 1.50

3773-3776 PB L 73502 — Calcium silicide in extrusion cast ingots of silumin. Nov 8, 1943. In German. 1.50

3777-3781 PB L 73502 — Solubility of nickel in aluminum. Oct 20, 1943. In German. 1.50

3782-3785 PB L 73502 — Resistance to corrosion of light metal screws in plastics. Nov 5, 1943. In German. 1.50

3786-3789 PB L 73502 — Appearance of high temperature melting segregations in aluminum alloys. Nov 5, 1943. In German. 1.50

3790-3795 PB L 73502 — Enclosures in extrusion cast round bars of silumin. Oct 31, 1943. In German. 1.50

3796-3816 PB L 73502 — Tests for the L A T - (Lehmann's mixing practice) - casting process. n. d. In German. 2.50

3817-3825 PB L 73502 — Resistance to corrosion of cans made of aluminum strip material. Oct 27, 1943. In German. 1.50

3826-3856 PB L 73502 — Corrosion tests in different stirring arrangements with Al-Cu-Mg-samples. Sept 22, 1943. In German. 3.50

3857-3859 PB L 73502 — Insolubility of cube nickel in aluminum. Sept 29, 1943. In German. 1.50

3860-3869 PB L 73502 — Process for determination of the grain cross-section. Aug 18, 1943. In German. 1.50

3870-3883 PB L 73502 — Internal stresses in Al-Cu-Mg extrusion cast bars. Sept 27, 1943. In German. 1.50

3884-3890 PB L 73502 — Operating test of Aldrey wires. Jun 11, 1943. In German. 1.50

3891-3896 PB L 73502 — Influence of the shape of the narrow sides of roll bars of 99,5% Al on the quality of strip. Aug 31, 1943. In German. 1.50

3897-3922 PB L 73502 — Corrosion tests with aluminum welding specimens in nitric acid. Sept 16, 1943. In German. 3.00

3923-3927 PB L 73502 — Deposition tests with bauxite. Sept 10, 1943. In German. 1.50

3928-3944 PB L 73502 — Damages to anodic oxide layers on corners and curvatures of aluminum pieces. Sept 3, 1943. In German. 3.00

3945-3951 PB L 73502 — Wood fiber fracture of pressed silumin bars. Aug 28, 1943. In German. 1.50

3952-3955 PB L 73502 — Capacity for deposition of bauxites with variable pressures. Sept 7, 1943. In German. 1.50

3956-3964 PB L 73502 — Influence of the primary structure on the resistance to corrosion of pure aluminum. Aug 6, 1943. In German. 1.50

3965-3979 PB L 73502 — Thermal refining of aluminum with lead. Aug 21, 1943. In German. 1.50

3980-3987 PB L 73502 — Purest aluminum for cable sheaths. Aug 14, 1943. In German. 1.50

3988-3989 PB L 73502 — Absorption of iron, when melting silumin in iron crucibles. Aug 31, 1943. In German. 1.50

3990-3997 PB L 73502 — Resistance to corrosion of eloxal (electrolytic oxidation) layers on aluminum strips. Aug 24, 1943. In German. 1.50

3998-4011 PB L 73502 — Plated Al-Zn-Mg-sheets (aviation material 3415). Jun 9, 1943. In German. 1.50

4012-4020 PB L 73502 — Copper saving substitutes for sheets and strips in the aviation industry. Apr 1943. In German. 1.50

4021-4044 PB L 73502 — Current and corrosion conditions of water cast apparatuses. Aug 18, 1943. In German. 2.50

4045-4048 PB L 73502 — Annealing of arc lamp carbon for spectrum analysis. Jul 7, 1943. In German. 1.50

4049-4060 PB L 73502 — Strips of purest aluminum. n.d. In German. 1.50

4061-4068 PB L 73502 — Leaching of synthetic calcium aluminates with 4% soda solution. Jul 30, 1943. In German. 1.50

4069-4072 PB L 73502 — "Spiders" in extrusion cast Al-Cu-Mg-alloy bars. Jul 31, 1943. In German. 1.50

4073-4092 PB L 73502 — Comparison between autogenous and arc welding of castings made of silumin-gamma. Jul 31, 1943. In German. 2.00

4093-4099 PB L 73502 — The yield of the solution obtained from "chromium sludge." Jul 12, 1943. In German. 1.50

4100-4107 PB L 73502 — Tendency to heat crack of Al-Mg-Zn alloys. Jul 1, 1943. In German. 1.50

4108-4110 PB L 73502 — Capability for granulation of remelt alloys in the range of hot shortness. Jul 30, 1943. In German. 1.50

4111-4113 PB L 73502 — Aluminum-coating of iron strips. Jul 29, 1943. In German. 1.50

4114-4115 PB L 73502 — Strength tests on silumin-gamma. Jul 28, 1943. In German. 1.50

4116-4129 PB L 73502 — Extraction of Al from Cu-containing alloys with lead (Kirsebom-process). Mar 12, 1943. In German. 1.50

4130-4132 PB L 73502 — Examination of a compound casting (brass-light metal). Jul 5, 1943. In German. 1.50

4133-4138 PB L 73502 — Aggressive action of high percentage hydrogen peroxide on pure 99.5% aluminum. Jun 27, 1943. In German. 1.50

4139-4141 PB L 73502 — Metallurgical tests with duralumin powder. Jul 13, 1943. In German. 1.50

4143-4144 PB L 73502 — Steel strips treated according to the Feralumin process. Jul 13, 1943. In German. 1.50

4145 PB L 73502 — Determination of the Si-content of a silumin sample. Jul 9, 1943. In German. 1.50

4146 PB L 73502 — X-ray test of silumin-valve castings. Jul 8, 1943. In German. 1.50

4147 PB L 73502 — Determination of the iron and sodium content of silumin. Jul 8, 1943. In German. 1.50

4148 PB L 73502 — Determination of the iron and sodium content of silumin. Jul 8, 1943. In German. 1.50

4149 PB L 73502 — Analysis of sodium and iron of silumin-pouring samples. Jul 8, 1943. In German. 1.50

4150-4156 PB L 73502 — Comparison tests with core binders. Oct 8, 1942. In German. 1.50

4157-4166 PB L 73502 — Cases of remelt-Al-Si-alloy. Oct 7, 1942. In German. 1.50

4167-4177 PB L 73502 — Stability of ammonium persulfate in ammoniacal solutions. Oct 7, 1942. In German. 1.50

4178-4181 PB L 73502 — Bauxite with high content of silicic acid. Oct 6, 1942. In German. 1.50

4182-4185 PB L 73502 — Distribution of iron in silumin. Oct 2, 1942. In German. 1.50

4186-4193 PB L 73502 — Protection of the cutting edges of copper-plated aluminum (cupal). Sept 28, 1942. In German. 1.50

4194-4197A PB L 73502 — Formation of grooves on electrolytically polished Al-tubes. Sept 28, 1942. In German. 1.50

4198-4211 PB L 73502 — Corrosion test with standard remelt-alloys. Sept 30, 1942. In German. 1.50

4212-4213 PB L 73502 — Detection of magnesium in aluminum alloys. Sept 28, 1942. In German. 1.50

4214-4217 PB L 73502 — Sheet iron coated with aluminum. Sept 23, 1942. In German. 1.50

4218 PB L 73502 — Controlling the degree of refining silumin. Sept 18, 1942. In German. 1.50

4219 PB L 73502 — Casting test. Sept 18, 1942. In German. 1.50

4220 PB L 73502 — Chemical analysis of silumin fragments. Sept 12, 1942. In German. 1.50

4221 PB L 73502 — Quality test of silumin. Sept 15, 1942. In German. 1.50

4222-4223 PB L 73502 — Quality test of sheets from Al-Mg 5-alloy. Sept 12, 1942. In German. 1.50

4224-4225 PB L 73502 — Surface characteristics of eloxidized and colored pieces of Al-Mg-Si-alloy. Sept 12, 1942. In German. 1.50

4226-4242 PB L 73502 — Silumin production. Aug 1942. In German. 2.50

4243-4248 PB L 73502 — Resistance of aluminum and aluminum alloys to nitric acid. Sept 11, 1942. In German. 1.50

4249-4254 PB L 73502 — Aluminum tubes corroded by cooling water. Sept 11, 1942. In German. 1.50

4255-4256 PB L 73502 — Difficulties with the machining of silumin. Sept 10, 1942. In German. 1.50

4257-4259 PB L 73502 — The resistance of aluminum alloys to hydrocyanic acid. Sept 10, 1942. In German. 1.50

4260-4268 PB L 73502 — Resistance of aluminum and aluminum alloys to nitric acid. Sept 9, 1942. In German. 1.50

4269-4284 PB L 73502 — Purest aluminum for cable sheaths. Jul 18, 1942. In German. 2.00

4285-4292 PB L 73502 — Silumin foundry. Dec 22, 1941. In German. 1.50

4293-4297 PB 73502 — Appearances of corrosion on collecting troughs made of aluminum plates. Sept 9, 1942. In German. 1.50

4298-4299 PB L 73502 — Insufficient hardening of silumin-gamma castings. Sept 1, 1942. In German. 1.50

4300-4321 PB L 73502 — Resistance of aluminum and its alloys to synthetic fatty acids. Sept 3, 1942. In German. 2.50

4322-4329 PB L 73502 — Test of enkine crankcases from silumin-gamma. Aug 24, 1942. In German. 1.50

4330 PB L 73502 — Laminated silumin by treatment with ammonium chloride. Aug 29, 1942. In German. 1.50

4331-4336 PB L 73502 — Atmospheric tests in the Lautawerk vicinity. Jul 6, 1942. In German. 1.50

4337-4342 PB L 73502 — Allowable quality of zinc for Al-Zn-Mg-alloys. In German. 1.50

4343-4361 PB L 73502 — Arrangements for extrusion casting of aluminum. Jun 1, 1942. In German. 2.00

4362-4365 PB L 73502 — Objection to pure aluminum (99.5%) for centrifugal casting. Aug 6, 1942. In German. 1.50

4366-4391 PB L 73502 — Soft annealing and influence of air cooling on structural aluminum sheets. Jul 27, Aug 1,5, 1942. In German. 3.00

4392-4395 PB L 73502 — Influence of the result-alloy UGAl-Si 10. Aug 5, 1942. In German. 1.50

4396-4402 PB L 73502 — Wear-resistance of Pantal 5 and silumin-gamma. Jul 31, 1942. In German. 1.50

4403-4410 PB L 73502 — The influence of the final and intermediate pickling on the resistance to corrosion of purest aluminum sheets. Aug 3, 1942. In German. 1.50

4411-4413 PB L 73502 — After-hardening appearances on ingot pieces of the alloy Al-Cu-Mg. n. d. In German. 1.50

4414-4419 PB L 73502 — The dependency of the resistance to etching of aluminum foils upon the segment of the preliminary treatment. Jul 18, 1942. In German. 1.50

4420-4429 PB L 73502 — Porous and slaty sheets from an alloy of the Al-Mg-Si type. Jun 30, 1942. In German. 1.50

4430-4437 PB L 73502 — Refining of silumin with a low-melting ternary salt mixture. Jul 29, 1942. In German. 1.50

4438-4441A PB L 73502 — Influence of nitrobenzene on aluminum and aluminum alloys. Jul 29, 1942. In German. 1.50

4442-4447 PB L 73502 — Investigations of cans. Jul 22 and 25, 1942. In German. 1.50

4448-4450 PB L 73502 — Destructions on a tank car of pure aluminum (99.5%). Jul 21, 1942. In German. 1.50

4451-4455 PB L 73502 — Extrusion cast ingots of Al-Cu-Mg-alloy. Jul 21, 1942. In German. 1.50

4456-4463 PB L 73502 — Defects in water cast ingots. Jul 20, 1942. In German. 1.50

4464 PB L 73502 — Silumin and silumin special alloys. May 1, 1942. In German. 1.50

4465-4467 PB L 73502 — Increase in hardness by storing Bandur extrusion casting. Jul 16, 1942. In German. 1.50

4468-4473 PB L 73502 — Formation of spots by black dyeing electrolytically oxidized castings of silumin-gamma. Jul 14, 1942. In German. 1.50

4474-4476 PB L 73502 — Exudations on the surface of extrusion cast-Al-Cu-Mg-forged ingots. Jul 11, 1942. In German. 1.50

4477-4478 PB L 73502 — Calibration alloys. Jul 8, 1942. In German. 1.50

4479-4480 PB L 73502 — Cast-samples of silumin and silumin-gamma. Jul 7, 1942. In German. 1.50

4481-4482 PB L 73502 — Examination of silumin-die casting samples. Jun 30, 1942. In German. 1.50

4483-4490 PB L 73502 — Solubility of vanadium oxide in thoroughly stirred aluminate lye (thin liquor). Jun 27, 1942. In German. 1.50

4491-4494 PB L 73502 — Defects in extrusion drawn bolts of RC 124 alloy. Jul 10, 1942. In German. 1.50

4495-4507 PB L 73502 — Comparative alternating strength measurements by round-bending machines. Jul 9, 1942. In German. 1.50

4508-4510 PB L 73502 — Examination of a hexagon profile from Al-Cu-Mg-alloy. Jun 24, 1942. In German. 1.50

4511 PB L 73502 — Casting test on silumin-gamma. Jul 1, 1942. In German. 1.50

4513-4514 PB L 73502 — Test of several silumin alloys. Jun 27, 1942. In German. 1.50

4515-4520 PB L 73502 — Rim defects on strips of KW-plates. Jun 19, 1942. In German. 1.50

4521-4532 PB L 73502 — Improvement of the resistance to corrosion of sheets and wires of purest aluminum. Jun 5, 1942. In German. 1.50

4533-4534 PB L 73502 — Absorption of iron when melting silumin in iron crucibles. Jul 2, 1942. In German. 1.50

4535-4536 PB L 73502 — Corrosion test of Aldrey-wires. Jul 1, 1942. In German. 1.50

4537-4540 PB L 73502 — Airplane wheels of pure silumin. Jul 1, 1942. In German. 1.50

4541-4543 PB L 73502 — Defective fittings of UG-Al-Mg-alloy. Jun 26, 1942. In German. 1.50

4544-4550 PB L 73502 — Continuous bending strength of beta-Mg-silumin. Jun 20, 1942. In German. 1.50

4551-4562 PB L 73502 — Influence of the melting conditions on the properties of silumin. Jul 19, 1942. In German. 1.50

4563-4566 PB L 73502 — Porous plated sheets of aluminum alloy. Jun 19, 1942. In German. 1.50

4567-4569 PB L 73502 — Aldrey wires with too low electrical conductivity. Jun 15, 1942. In German. 1.50

4570-4577 PB L 73502 — Influence of the degree of deformation on the static strength with thin strand cast ingots of Al-Cu-Mg-alloy. May 23, 1944. In German. 1.50

4578-4639 PB L 73502 — The local strength of extrusion press sections. n. d. In German. 6.50

4640-4653 PB L 73502 — Purification of bauxite. May 4, 1944. In German. 1.50

4654-4659 PB L 73502 — Bad decomposition of red mud. Apr 26, 1944. In German. 1.50

4660-4661 PB L 73502 — Aluminum wire of high strength. May 15, 1944. In German. 1.50

4662-4694 PB L 73502 — Increase and structure of thin oxide layers on aluminum, electrical conductivity and oxidation of vaporized aluminum layers. Presumably 1944. In German. 3.50

4695-4702 PB L 73502 — Influence on the structure of water cast pressed ingots from Al (99,5%). Apr 22, 1944. In German. 1.50

4703-4705 PB L 73502 — Destruction of aluminum foil rolls by influence of moisture. May 5, 1944. In German. 1.50

4706-4713 PB L 73502 — The formation of the Mg$_2$-Si-crystals in the G-Al-Mg-alloy Flw. 3350. Apr 29, 1944. In German. 1.50

4714-4715 PB L 73502 — Examinations of a foil dropped from an airplane. Apr 28, 1944. In German. 1.50

4716-4726 PB L 73502 — The shortening of the annealing time with tension-drawing and deep-drawing of Al-Cu-Mg-sheets. May 1944. In German. 1.50

4727-4731 PB L 73502 — Desilicification of bauxite by annealing in the hydrogen chloride current. Apr 1, 1944. In German. 1.50

4732-4734 PB L 73502 — Examination of the structure of water cast round bars from Al-Mg-Si-alloy. Apr 24, 1944. In German. 1.50

4735-4738 PB L 73502 — Extrusion cast ingots of Al-Cu-Mg-alloy with cold shut surfaces. Mar 27, 1944. In German. 1.50

4739 PB L 73502 — Examinations of silumin castings. Mar 31, 1944. In German. 1.50

4740-4742 PB L 73502 — Coarse-crystalline fractures on silumin-castings. Mar 20, 1944. In German. 1.50

4743-4744 PB L 73502 — Separations of material in the interior of pressed pieces of Lo-Ex-alloy. Mar 20, 1944. In German. 1.50

4745-4746 PB L 73502 — Unfit pigs of Al-Si 10. Mar 1944. In German. 1.50

4747-4753 PB L 73502 — Conversion of bauxite rich in silicic acid into bauxite poor in silicic acid. Mar 14, 1944. In German. 1.50

4754-4757 PB L 73502 — Defects on rolled condenser tubes from pure aluminum (99,5%). Mar 25, 1944. In German. 1.50

4758-4759 PB L 73502 — Formation of cracks on a blast-furnace slag mold of UOAl-Si 10. Mar 2, 1944. In German. 1.50

4760-4763 PB L 73502 — Examination of a copper-plated aluminum profile ("Cupal"). n.d. In German. 1.50

4764-4771 PB L 73502 — Influence of the grain size of different bauxites on the clarification in the Bayer process. Feb 25, 1944. In German. 1.50

4772-4777 PB L 73502 — Continuous cast structure alloy KC 124. Mar 20, 1944. In German. 1.50

4778-4781 PB L 73502 — Production of gears of silumin. Mar 17, 1944. In German. 1.50

4782-4802 PB L 73502 — Quality control in the foundry. Feb 24, 1944. In German. 3.50

4803-4804 PB L 73502 — Rolling strips onto Al-Cu-Mg-sheets. Mar 3, 1944. In German. 1.50

4805-4806 PB L 73502 — Examination of a covering melt. Feb 24, 1944. In German. 1.50

4807-4812 PB L 73502 — Corrosion of aluminum condenser tubes. Feb 28, 1944. In German. 1.50

4813-4818 PB L 73502 — Effects of small lead contents of silumin-gamma. Mar 3, 1944. In German. 1.50

4819 PB L 73502 — Sodium content of silumin. Sept 4, 1943. In German. 1.50

4820 PB L 73502 — Magnesium content of silumin. Sept 13, 1943. In German. 1.50

4821-4831 PB L 73502 — Multiple extrusion casting with piston alloy bars. Feb 10, 1944. In German. 1.50

4832-4841 PB L 73502 — Resistance of aluminum and aluminum alloys to precipitating baths in rayon plants. Feb 10, 1944. In German. 1.50

4842-4879 PB L 73502 — Experiments for the IAT-process (Lehmann-casting practice). Jan 25, 1944. In German. 4.00

4880-4881 PB L 73502 — Material defects of silumin castings. Feb 3, 1944. In German. 1.50

4882-4892 PB L 73502 — Measurement of hardness of aluminum pressed parts. Feb 14, 1944. In German. 1.50

4893-4895 PB L 73502 — Testing of welding powder for light metals. Feb 18, 1944. In German. 1.50

4896-4902 PB L 73502 — The forming processes on annealing of aluminum-silicon-alloys. Feb 17, 1944. In German. 1.50

4903-4906 PB L 73502 — Hard inclusions in a piston alloy. Feb 15, 1944. In German. 1.50

4907-4914 PB L 73502 — New melting process for light metal chips. n. d. In German. 1.50

4915-4917 PB L 73502 — Al-Mg-Si-bars which show cracks after rolling. Feb 5, 1944. In German. 1.50

4918-4921 PB L 73502 — Cleaning of intensely soiled light metal chips. Jan 25, 1944. In German. 1.50

4922-4924 PB L 73502 — Pure aluminum strips for cans. Jan 22, 1944. In German. 1.50

4925 PB L 73502 — Examination of structure of a cylinder head of silumin gamma. Jan 21, 1944. In German. 1.50

4926-4928 PB L 73502 — Resistance to corrosion of die casting alloys of the Al-Mg type. Jan 19, 1944. In German. 1.50

4929-4939 PB L 73502 — New aluminum alloy Ulminum T. Jan 21, 1944. In German. 1.50

4940-4950 PB L 73502 — Sand cast alloy on an Al-Zn-Mg basis. Jan 18, 1944. 1.50

4951-4959 PB L 73502 — Dissolving-annealing and hot storing of hypoeutectic silumin-gamma. Dec 8, 1943. In German. 1.50

4960-4961 PB L 73502 — Vaporization tests of Dural melts with sulfur dioxide. Dec 28, 1943. In German. 1.50

4962-4963 PB L 73502 — Aluminum sheets for cans. Jan 12, 1944. In German. 1.50

4964-4965 PB L 73502 — Solder for aluminum and its alloys. Jan 10, 1944. In German. 1.50

4966-4968 PB L 73502 — Corrosion of aluminum tubes by action of cooling-water. Jan 10, 1944. In German. 1.50

4969-4975 PB L 73502 — Experiments for improving the Vdda-alloy 211. Jan 7, 1943. In German. 1.50

4976-4980 PB L 73502 — Iron mold cast from remelt-alloy of the classification UG Al-Cu-Si. Dec 24, 1943. In German. 1.50

4981 PB L 73502 — Determination of sodium on silumin cast samples. Dec 17, 1943. In German. 1.5(

4982-4989 PB L 73502 — Silumin of purest aluminum and silicon. Dec 24, 1943. In German. 1.50

4990-5003 PB L 73502 — Corrosion of aluminum tubes by cooling-water. Dec 17, 1943. In German. 1.50

5004-5006 PB L 73502 — Corrosions on the valve cone of a water valve. Dec 17, 1943. In German. 1.50

5007-5012 PB L 73502 — Deposition tests with bauxite. Dec 14, 1943. In German. 1.50

5013 PB L 73502 — Re-determination on silumin-beta. Dec 8, 1943. In German. 1.50

5014-5037 PB L 73502 — Duralumin Cu 30 (Al-Cu-Mg-alloy with 3% Cu). May 17, 1940. In German. 2.50

5038-5052 PB L 73502 — Production of pure alumina from raw materials containing aluminum hydroxide. Nov 26, 1943. In German. 1.50

5053-5059 PB L 73502 — Calcium silicide in extrusion cast ingots of Flw. 3210/11. Nov 26, 1943. In German. 1.50

5060-5063 PB L 73502 — Damages to aluminum gasketing in nitriding boxes. Dec 10, 1943. In German. 1.50

5064-5086 PB L 73502 — Re-formation and tension corrosion of aluminum-zinc-magnesium alloys. Nov 15, 1943. In German. 2.50

5087-5092 PB L 73502 — Hardening and testing of castings. Dec 3, 1943. In German. 1.50

5093-5096 PB L 73502 — Quality test of silumin sand-mold cast. Nov 25, 1943. In German. 1.50

5097 PB L 73502 — Determination of the degree of refining of silumin-gamma. Nov 19, 1943. In German. 1.50

5098 PB L 73502 — Galvanization of silumin. Nov 18, 1943. In German. 1.50

5099-5100 PB L 73502 — Conductivity of aluminum wires. Feb 23, 1937. In German. 1.50

5101 PB L 73502 — Aluminum alloys with addition of lead. Feb 23, 1937. In German. 1.50

5102-5104 PB L 73502 — Stabilizers for bromoform in the presence of aluminum. Feb 23, 1937. In German. 1.50

5105-5106 PB L 73502 — Automatic alloy "Berlinal DB". Feb 23, 1937. In German. 1.50

5107 PB L 73502 — Resistance to corrosion of a rope made of foils. Feb 20, 1937. In German. 1.50

5108-5114 PB L 73502 — Tests with sand-mold cast alloys. Feb 18, 1937. In German. 1.50

5115 PB L 73502 — Aluminum coating of tungsten wire. Feb 18, 1937. In German. 1.50

5116-5118 PB L 73502 — Fractures on a round profile of Al-Cu-Mg-alloy. Feb 17, 1937. In German. 1.50

5119-5130 PB L 73502 — Corrosion tests with aluminum foil. Feb 17, 1937. In German. 1.50

5131 PB L 73502 — This frame is illegible.

5132-5133 PB L 73502 — Destruction of an aluminum rope. Feb 16, 1937. In German. 1.50

5134-5136 PB L 73502 — Testing process for color coatings on light metal. Feb 13, 1937. In German. 1.50

5137-5140 PB L 73502 — Resistance to corrosion of fittings of G 54 with several additions. Feb 12, 1937. In German. 1.50

5141 PB L 73502 — Formation of spots on electrolytically oxidized hydronalium sheet. Feb 11, 1937. In German. 1.50

5142 and 5144 PB L 73502 — Straying capacity of the electrolytic-oxidized electrolyte. Feb 11, 1937. In German. 1.50

5143 PB L 73502 — Experiments with Cosrit lacquers. Feb 11, 1937. In German. 1.50

5145 PB L 73502 — Test of an automatic alloy. Feb 11, 1937. In German. 1.50

5146 PB L 73502 — Raw castings sample of aluminum and copper. Feb 9, 1937. In German. 1.50

5147-5149 PB L 73502 — Resistance of fuels containing methanol to pure aluminum. Feb 8, 1937. In German. 1.50

5150-5151 PB L 73502 — Aluminum melted in the induction furnace. Feb 8, 1937. In German. 1.50

5152-5153 PB L 73502 — Conductivity of aluminum wires. Feb 8, 1937. In German. 1.50

5154-5156 PB L 73502 — Resistance of aluminum to bromoform. Feb 8, 1937. In German. 1.50

5157-5159 PB L 73502 — Experiments with FKL-aluminum-desmolyzing agents. Feb 6, 1937. In German. 1.50

5160-5166 PB L 73502 — Continuous heating experiments with pure aluminum wires. Feb 3, 1937. In German. 1.50

5167-5171 PB L 73502 — Change of the SO_2-absorption in the saturators. Feb 13, 1937. In German. 1.50

5172-5175 PB L 73502 — Hardening of Daltal. Feb 17, 1937. In German. 1.50

5176-5179 PB L 73502 — Resistance to corrosion of the protecting cover by sodium-chromate-treatment. Feb 17, 1937. In German. 1.50

5180-5186 PB L 73502 — Distillation of B-metal (boron!). Feb 3, 1937. In German. 1.50

5187-5190 PB L 73502 — Comparison experiments with magnesium. Jan 30, 1937. In German. 1.50

5191-5195 PB L 73502 — Alternating bending strength of drawn pure aluminum. Jan 29, 1937. In German. 1.50

5196-5197 PB L 73502 — Corrosion tests with several manganese-additions to G 84. Jan 29, 1937. In German. 1.50

5198 PB L 73502 — Anodically oxidized fittings. Jan 27, 1937. In German. 1.50

5199-5200 PB L 73502 — Cracks in turned parts of light metal bar. Jan 27, 1937. In German. 1.50

5201-5201A PB L 73502 — Annealing time of small aluminum bars. Jan 26, 1937. In German. 1.50

5202 PB L 73502 — Corrugated aluminum. Jan 23, 1937. In German. 1.50

5203-5205 PB L 73502 — Resistance of natural asphalt powder to pure aluminum and its alloys. Jan 22, 1937. In German. 1.50

5206-5209 PB L 73502 — Reactivity of Aldrey wires. Jan 21, 1937. In German. 1.50

PB L 73502-S. VEREINIGTE ALUMINIUM WERKE, LAUTAWERK/LAUSITZ, GERMANY. Aluminum and aluminum alloys. (FIAT Microfilm Reel G 3, Frames 3461-5209, abstract cards) 1937-1944. 261 p. Price: Microfilm-$6.00 - Photostat-$18.00
Brief abstracts of the individual items on the above reel, G 3, PB 73502, prepared by FIAT personnel in Germany.

PHYSICS

General

PB L 63667. ISHLINSKII, A. IU. The problem of plasticity with axial symmetry and brinell's test. (David W. Taylor Model Basin Translation RMB-8). 1946. 37 p. Price: Microfilm-$1.00 - Photostat-$3.00
Experimental data have shown that hardness according to Bunell and Rockwell is a definite function of the yield limit of the material. A study was made of the problem in the case of axial symmetry considering the pressure of a ball or a flat stamp upon an ideal plastic semi-space. The small curvative of the free surface of the body in the neighborhood of the stamp which appears during the plastic deformation is neglected and it is assumed that the boundary of the plastic body which is not in contact with the stamp remains plane. The original report, in Russian, appeared in "Prikladnaia Matematika i Mekhanika 8 201-224 (1944). Data tables, diagrams and graphs are included.

PB L 63664. KACHANOV, L. M. The plastic-elastic state of solids. (David W. Taylor Model Basin Translation RMB-5). 1946. 13 p. Price: Microfilm-$1.00 - Photostat-$1.00
Based on experiments on the deformation of solids which show that a number of materials are of similar character, an ideal model was constructed of an unevenly heated solid with the following properties: (1) The solid was isotropic and homogeneous and its mechanical properties were assumed constant within the limit of the encountered differences in temperature; (2) the internal state of the body was completely determined by seven independent parameters; (3) the change in density of the solid consisted of two parts, an elastic change of volume and a cubic dilatation due to the heating; and (4) the strain tensor was a linear function of the stress tensor. The original Russian report is from "Prikladnaia Matematika i Mekhanika 5". 431-438 (1941).

* PB L 79622. MCKAG, A. H. and SHELTON, E. H. Interrogation of Prof. Rudolf Hilsch, Oct. 21, 1946. (Low temperature physics.) (BIOS Interrogation Rept 365) Dec 1946. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
This report presents information on Hilsch's work with solid semi-conductors, photoconductivity, and luminescent phenomena in alkali halide crystals.

PB L 80701. SHORTLEY, GEORGE and others. Numerical solution of axisymmetrical problems, with applications to electrostatics and torsion. Jan 1947. 14 p. (Available from American Institute of Physics, 57 East 55 St., N. Y. 22, N. Y., $1.00)
This paper represents an extension of the numerical methods for handling partial differential equations in two dimensions, which were developed in recent work on "Numerical Solution of Laplace's and Poisson's Equations, with Applications to Photoelasticity and Torsion." This is a reprint from Journal of Applied Physics, Vol. 18, No. 1, 116-129. Jan. 1947.

Nuclear

PB L 85338. ANDERSON, H. L. and others. Method for measuring neutron-absorption cross-sections by the effect on the reactivity of a chain-reacting pile. (Manhattan Eng District MDDC Rept 669). Feb 1947. 14 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
This paper from the Argonne National Laboratory describes a method for measuring neutron absorption cross sections based on the following principle: Introduction of a neutron-absorbing substance into a pile decreases the reactivity and in order to keep the power level constant the control rods must be displaced. By proper calibration this displacement may be used as a precision measure of the absorption cross section. Published in the Physical Review, vol. 72, pp. 16-23, July 1, 1947.

PB L 85337. BARKER, E. C. The total disintegration energy of Na^{24m}. (Manhattan Eng District MDDC Rept 706). Feb 1947. 1 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
Coincidence measurements have shown that the two γ-rays of Na^{24} are probably emitted in cascade. Sachs has pointed out that the disentegration energy of Na^{24} may thus be higher than would be expected according to Barkas. The report is the result of another experiment bearing directly on the same question. Published in the Physical Review, vol. 71, p. 453, 1947.

PB L 85336. BIGELEISEN, J. and MAYER, M. G. Calculation of equilibrium constants for isotopic exchange reactions. (Manhattan Eng District MDDC-Rept 707). Jan 1947. 24 p.

(Available from the American Institute of Physics, 57 East 55 St., N. Y. 22, N. Y., $1.00).
It is pointed out that the possibility of chemical separation of isotopes is a quantum effect. This permits a direct calculation of the difference in the free energies of two isotopic molecules. Tables and approximation methods are given which permit a rapid calculation of equilibrium constants if the frequency shifts on isotopic substitution are known. Several applications are discussed. Published in the Journal of Chemical Physics, vol. 15, pp. 261-267, May 1947.

PB L 85335. BLOCH, F. and others. Spin and magnetic moment of tritium. (Manhattan Eng District MDDC Rept 618). Feb 1947. 2 p. (Available from the American Institute of Physics, 57 East 55 St. New York 22, N. Y., $1.00).
Nuclear induction has been applied to a small sample containing a 0.3 molar solution of $MnSO_4$ in H_2O and clearly distinguishable signals have been obtained from both hydrogen isotopes, H_1 (proton) and H_3 (triton) present in the sample. Published in the Physical Review, vol. 71, pp. 373-374, 1947.

PB L 78662. CALVIN, M. and LEMMON, R. M. The decarboxylation of ethyl pyruvate. Apr 1947. 1 p.
Price: Microfilm-$1.00 - Photostat-$1.00
For an abstract of this report, based on work under contract with the Atomic Energy Commission in connection with the Radiation Laboratory, and Department of Chemistry, University of California, see this issue of the Bibliography, under "Chemicals and Allied Products--Miscellaneous Chemicals."

PB L 85339. FIELDS, T. and others. Total cross sections measured with photo-neutrons. (Manhattan Eng District MDDC Rept 256; CP Rept 3470). Mar 1946. 15 p. (Available from the American Institute of Physics, 57 East 55 St. New York 22, N. Y., $1.00).
The total neutron cross sections of twenty-three elements have been measured using six photo-neutron sources ranging from .024 Mev to .83 Mev. A diagram and data tables are included. This is a report from the Argonne National Laboratory. Published in the Physical Review, vol. 71, pp. 508-510, 1947.

PB L 85340. INGHRAM, M. G. and others. Neutron cross-sections for mercury isotopes. (Manhattan Eng District MDDC Rept 673). Feb 1947. 3 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
125 milligrams of α-phase mercuric sulfide were submitted to long bombardment by neutrons in a graphite pile. To liberate the mercury the sample was placed in a closed system and heated while oxygen was flowing through the system. The free mercury was collected at - 40° C in a glass sample tube and then transferred to the sample system of a Nier type mass spectrometer. This is a report from the Argonne National Laboratory. Published in the Physical Review, vol. 71, p. 561, 1947.

PB L 85341. KATCOFF, SEYMOUR. Preliminary determination of the neutron absorption cross section of long-lived I^{129}. (Manhattan Eng District MDDC Rept 292; LADC Rept 230). Sep 1946. 5 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
The slow neutron absorption cross section of long-lived I^{129} was found to be about 8 barns, correct to within a factor of ten. This was done by bombarding, at the Los Alamos water boiler, some iodine which had been isolated from an irradiated uranium slag. Published in the Physical Review, vol. 71, p. 826, June 1, 1947.

PB L 85342. LAPP, R. E. and others. The neutron absorbing isotopes in gadolinium and samarium. (Manhattan Eng District MDDC Rept 61). Jun 1946. 5 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
The particular isotopes in these elements responsible for large absorption have been identified by means of mass spectra made with a double focusing mass spectrograph, using the spark with nickel tubes packed with oxide as electrodes. Mass spectra of normal samples were compared photometrically with those of samples in which this isotope abundance had been altered by long exposure to slow neutrons. Published in the Physical Review, vol. 71, pp. 745-747, June 1, 1947.

PB L 69954. MARSDEN, E. and WATSON-MUNRO, C. Radioactivity of New Zealand soils and rocks. (Extracted from the New Zealand Journal of Science and Technology, Vol. 26, no. 3). Oct 1944. 16 p. Price: Microfilm-$1.00 - Photostat-$2.00
Measurements of the alpha ray activity of various soils and rocks in New Zealand, Australia, and Great Britain are recorded. Analysis of the results shows that soil radioactivities are dependent upon the rocks from which they are derived rather than the type of soil. Basalts, andesites, rhyolites, and limestones gave low readings, while granites and greywackes gave high readings of alpha ray activities in ionization currents $\times 10^{18}/cm^2$. These results were confirmed in the case of greywackes and basalts by observations with the gamma ray chamber. The gamma ray activity of potassium salts in samples influenced the results considerably.

PB L 85343. SACHS, R. G. On the magnetic moment of the deuteron. (Manhattan Eng District MDDC Rept 786). Apr 1947. 17 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
An attempt is made to calculate the relativistic correction to the magnetic moment of the deuteron in order to determine the D state probability from the accurately determined proton, deuteron, and neutron moments. This is a report from the Argonne National Laboratory. Published in the Physical Review, vol. 72, pp. 91-98, July 15, 1947.

PB L 85344. SAWYER, R. B. and others. A bent crystal neutron spectrometer and the cross-sections of cadmium and iridium. (Manhattan Eng District MDDC Rept 327). Sep 1946. 17 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
This paper describes a neutron spectrometer similar to the Cauchois transmission type of X-ray spectrometer and its application to the measurement of the total cross section of cadmium and iridium. Diagrams and graphs are included. Published in the Physical Review, vol. 72, pp. 109-115, July 15, 1947.

PB L 52683-R. SHONKA, F. R. and others. Survey instrument Mark 1, model 21A Zeus. (Revision of PB 52683). (Manhattan Eng District MDDC Rept 118, rev.). Nov 1945. 3 p. Price: Mimeo-$0.25
This instrument is used for measuring alpha, beta and gamma indications in health survey work. Zeus circuit diagram and two photographs are included. The original document of which this is a revision has been made available on page 793, vol. 5, this bibliography.

PB L 85346. STURM, W. J. Measurement of neutron cross-sections with a crystal spectrometer. (Manhattan Eng District MDDC Rept 735). Jan 1947. 42 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
Employing the monenergetic beams of neutrons diffracted from

the (100) planes of lithium fluoride, survey measurements of the total neutron cross section of a series of elements have been made. The strong diffracted beams were obtained by placing a single crystal in the high flux of neutrons emitted by the heavy water moderated pile at the Argonne Laboratory. Observations on this group of elements, which includes several strongly absorbing rare earths, and elements commonly used as neutron filters and detectors, have been made in the range of energy between 0.04 and 65.0 electron volts. The method permits energy dependent cross section measurement by activation or by transmission. Published in the Physical Review, vol. 71, pp. 757-776, June 1, 1947.

PB L 85345. STURM, W. J. and ARNOLD, G. P. The total neutron cross-section of dysprosium and neodymium. (Manhattan Eng District MDDC Rept 736). Mar 1947. 6 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
Studies by Fermi and Marshall of the order intensities of Bragg-reflected neutron beams for many substances show that the (III) plane of lithium fluoride is particularly well suited for neutron monochromator work since the reflectivity for high orders is very small. Such Li F (III) crystals have been used with the crystal spectrometer at the Argonne National Laboratory. The cross sections of dysprosium and neodymium have been examined briefly in the region of slow neutron energies with the new crystals. Published in the Physical Review, vol. 71, p. 556, 1947.

PB L 80798. TUNNICLIFFE, P. R. Air proportional counters for hand and bench monitoring. (Natl Res Council of Canada. Atomic Energy Proj. CRTec- Rept 320). Feb 1947. 13 p. Price: Microfilm-$1.00 - Photostat-$1.00
Two counters for measuring alpha-contamination of the hands and flat surfaces such as laboratory work benches and floors are described. The "hand counter" has a sensitive area of 8" by 5", operates at 2350 volts and has a background of about five counts per minute. The "bench monitor" has a sensitive area of about 6" by 3/4", operates at about 2000 volts and has a background of about five counts per minute. Both counters contain air at atmospheric pressure and operate in the proportional region. Graphs and drawings included.

PB L 85347. WIGNER, E. P. and EISENBUD, L. Higher angular momenta and long range interaction in resonance reactions. (Manhattan Eng District MDDC Rept 676; NonP Rept 244). Feb 1947. 23 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
The results of two preceding articles on the energy dependence of the reaction and scattering cross sections are generalized. As before, the configuration space is divided into two parts. In the internal region or reaction zone there is no restriction on the type of interaction between the particles. In the external region, on the other hand, the interaction takes place between the colliding or separating particles without changing their structure (wave function). The present article deals with a more general situation than the preceding ones, first by allowing for an interaction, although only of a restricted type, outside the reaction zone. In addition, the present article does not restrict the angular momentum of the particles to zero but permits the treatment of arbitrary angular momenta. Published in the Physical Review, vol. 72, pp. 29-41, July 1, 1947.

PB L 85348. YANKWICH, P. E. Chemical forms assumed by C^{14} produced by neutron irradiation of beryllium nitride. (Manhattan Eng District MDDC Rept 793; BC Rept 36). Mar 1947. 5 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
Chemical fractionations have been made of the carbon 14 activity induced in powdered beryllium nitride by neutron bombardment. The beryllium nitride, prepared from finely powdered beryllium metal by exposure to nitrogen at high temperature, was pressed into aluminum slugs for irradiation at Hanford. Published in the Journal of Chemical Physics, vol. 15, pp. 374-375, June 1947.

PB L 85349. ZINN, W. H. Diffraction of neutrons by a single crystal. (Manhattan Eng District MDDC Rept 629). Jan 1947. 8 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
The intensity of neutrons emitted by the nuclear chain reactor has been shown to be sufficiently intense to permit the Bragg reflection of neutrons by a single crystal. A single crystal monochromator has been constructed and has been used for the investigation of resonances. The well-known resonance in Cd has been measured and the Breit-Wignor constants determined. This is a report of the Argonne National Laboratory. Published in the Physical Review, vol. 71, pp. 752-757, June 1, 1947.

PHYSIOLOGY

PB M 78708. FLEISCHMANN, WALTER. Comparative physiology of the thyroid hormone. n. d. 58 p. Price: Microfilm-$2.00 - Photostat-$4.00
This study was carried out at the Department of Pediatrics, Johns Hopkins University, Baltimore, and the Clinical Physiology Section, Medical Division, Edgewood Arsenal, Maryland. Based on a bibliography of 164 items, experimental work on the thyroid in vertebrates is reviewed, including a summary of the work done on invertebrates and tunicates. Some of the effects of thyroxin described in the text are elicited by the use of doses far exceeding the amounts of thyroid hormone elaborated by the animal's own gland. Other problems of interest are the storage of iodine in the thyroid, the relationship between the metabolic and the morphogenetic actions of the thyroid hormone, and the importance of the gland being greater to the young than to the older animal. Whereas man seems to stand alone in showing severe deficiency symptoms after removal of the thyroid gland in later life, all other species of vertebrates seem to require the thyroid hormone only during the early stages of growth and development.

*PB M 81628. GOEPFERT, HERBERT. The diffusion and absorption of respiration gases. (FIAT Final Rept 1110). Apr 1947. 16 p. Price: Mimeo-$0.50
This study was carried out at the Division of Experimental Pathology and Therapy in the W. G. Kerckhoff Institute for Heart Rearch, Bad Nauheim, Germany. Described is a method by which the diffusion process of respiration gases in water or aqueous salt solution can be observed. The theoretical calculations are derived from the diffusion formula. A special photographic method of measurement is used for the determination of ascending speed and ascending time of the gas bubbles. The results have been statistically evaluated and are graphically demonstrated. In German.

*PB M 78201. LADELL, W. S. S. A visit to Germany to investigate wartime advances in certain branches of applied physiology. February 7th to March 13th, 1946. (BIOS Final Rept 566, rev., Item 24). Mar 1947. 28 p. Price: Microfilm-$1.00 - Photostat-$2.00
This visit was made on behalf of the Royal Naval Personnel Research Committee in order (1) to explore further the possibility of evacuating hot room apparatus to Great Britain, (2) to interview German physiologists and other scientific workers to determine details of the tests on which the design of German winter clothing was based, and (3) to get details of the other climatological work carried out in Germany during the war.

PB M 78695. LANDAHL, H. D. and others. Passage through the nose and deposition in the lung of particles of measured size. n. d. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
The report summarizes the results obtained when atomized clouds of corn oil, sodium bicarbonate, methylene blue, and penicillin were inhaled by human subjects. The settling rates of the particles when inhaled at 17 liters or more per minute are discussed.

TRANSPORTATION EQUIPMENT

MARINE TRANSPORTATION

PB L 79626. FRENSTON, H. G. Interrogation of Dr. Karl Fracke, chief engineer, Schichau Werke, Elbing, Danzig. (Development of marine engines, Admiralty.) (BIOS Interrogation Rept 392) Feb 1947. 13 p. Price: Microfilm-$1.00 - Photostat-$1.00

This report presents information on the Fracke 24-cylinder 2-cycle uniflow scavenge engine with centrifugal scavenge pump, and a 10,000 h.p. single-acting 40-cylinder V-type engine, designed for installation in destroyers. Several sketches are included.

PB L 80688. KRUPP, FRIED. Field test report on type test of the main turbine power plant of the cruiser - Prinz Eugen: 11/2 to 11/12/38. (CONLAN 19). Nov 1938. 79 p. Price: Microfilm-$2.00 - Photostat-$6.00

The center plant was installed on the testing stand of the Germania Yard in an inclined position similar to its position on board. The main steam line, from the quick acting valve on, the connection pipes of the turbines, the suction and pressure conditions of the auxiliary turbines and the water lines, all corresponded to conditions on board. Similarly, the experimental boiler room had been constructed so as to correspond to conditions on board. The tests are described in detail and results given. A photograph, drawings, and tables are included.

PB L 82230. U. S. BUREAU OF SHIPS. Parts and instruction books for internal combustion engines, models Hercules DOOD, DWIDS, and DMX, and Hill 2 R. (Bur Ships Navy Dept Reel D 6040 (35 mm), Frames not numbered) Apr 1945. 864 f. Price: Microfilm-$7.00 - Enlargement print-$66.00

This reel contains four operation and maintenance manuals and parts lists, covering Hercules and Hill Diesel generating sets, and a marine Diesel engine. The individual manuals are listed below and will be available separately as enlargement prints only; the entire reel may be purchased in microfilm form for $7.00. Please include PB numbers and titles when ordering individual items from this reel.

Item	Title	Price
D 6040-1 (215 frames) PB L 82230	Four cylinder Hercules Diesel 10 KW-120 volt D. C. generating set, model DOOD.	$23.00
D 6040-2 (236 frames) PB L 82230	Six cylinder Hercules model DWIDS Diesel engine, and Allis-Chalmers 6 "IS" SJS-1000 r.p.m. motor.	25.00
D 6040-3 (242 frames) PB L 82230	Six cylinder Hercules marine Diesel engine, model DMX, with reverse and reduction gears.	26.00
D 6040-4 (171 frames) PB L 82230	Two cylinder 10 kw Hill Diesel generator set, model 2 R (for LCT vessels).	19.00

MISCELLANEOUS

PB L 73549. ERLANGEN, GERMANY. UNIVERSITY. Doctors' dissertations in natural sciences. (FIAT Microfilm Reel I-259, Frames 1008-1949) 1938-1941. 941 f. Price: Microfilm-$6.00 - Enlargement print-$94.50

This reel was prepared by FIAT investigators in Germany. Thirty-three individual items are listed below and will be available as enlargement prints; the entire reel may be purchased as a microfilm for $6.00. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
1008-1039 PB L 73549	Polymerization and depolymerization of phosphorus nitrile chlorides. 1939. In German.	$3.50
1040-1051 PB L 73549	The problem of the effect of ultraviolet rays on blood serum and proteins. 1940. In German.	1.50
1052-1060 PB L 73549	Influence of different pressures on the shifting and widening of the second upper harmonic in the molecular spectrum of hydrogen chloride. Jun 10, 1938. In German.	1.50
1061-1084 PB L 73549	Connection between the kinematic of the elliptic plane and the elliptic geometry of space. 1939. In German.	3.00
1085-1102 PB L 73549	Addition to knowledge on dehydrenium dyes and the structure of dibenzoxanthone. 1939. In German.	2.00
1103-1115 PB L 73549	Specific effect of ultra short waves. 1939. In German.	1.50
1116-1183 PB L 73549	The biology of important oil fruit parasites. 1940. In German.	7.00
1184-1201 PB L 73549	The quantitative polarographic determination of the components of steel alloys. 1939. In German.	2.00
1202-1257 PB L 73549	The atmosphere of the K-component of the star system Zeta Aurigae. 1939. In German.	6.00
1258-1283 PB L 73549	Exploration of oil shale in Lias Alpha near Bielefeld. Feb 1941. In German.	3.00
1284-1327 PB L 73549	Studies of skull shapes and shape changes of Berlin immigrants from the eastern parts of Europe and their children. n.d. In German.	4.50
1328-1337 PB L 73549	Investigations on the recognition of shapes by Phoxinus laevis. Apr 1941. In German.	1.50
1338-1382 PB L 73549	Investigation of muscular varieties of twins. Nov 1941. In German.	4.50
1383-1395 PB L 73549	Electrical arcing resistance of simple and multiple layers of organic substances. Feb 1941. In German.	1.50
1396-1492 PB L 73549	Morphologic, anatomic and historical studies on form irregularities with lichens. Feb 1941. In German.	10.00
1493-1514 PB L 73549	The reactions of tetrahydroxybutylquinoxaline with phenylhydrazine. May 1941. In German.	2.50
1515-1542 PB L 73549	Stabilization of a low frequency generator against alterations of the operating voltage. Apr 1941. In German.	5.00
1543-1563 PB L 73549	Research on the corynespora disease of the cucumber and the resistance of German species of cucumber. Mar 1941. In German.	2.50
1564-1571 PB L 73549	Research on the usefulness of photographic emulsions and fluorescing substances for measuring the intensity of ultraviolet rays. Jun 1941. In German.	1.50
1572-1606 PB L 73549	Stratigraphy and tectonics of Yugoslavia. Oct 1941. In German.	3.50

1607-1624 PB L 73549 — Investigations on the influence of the carrier material on the thermal electron emission of oxycathodes. Feb 1941. In German. 2.00

1625-1636 PB L 73549 — Experimental investigations of the theory of sound propagation in sound attenuating tubes. Feb 1941. In German. 1.50

1637-1662 PB L 73549 — The temperature correction of elastic aneroid capsules. Feb 1940. In German. 3.00

1663-1717 PB L 73549 — Nationalization and agricultural exploitation of Uruguay. Jul 1941. In German. 5.50

1718-1739 PB L 73549 — The conversion of sulfonyl chlorides with sodium compounds of the sodium manol ester type. Nov 1941. In German. 2.50

1740-1788 PB L 73549 — Nutrition physiology of the nun caterpillar. Jan 1941. In German. 5.00

1789-1806 PB L 73549 — Relations between altitude radiation and air pressure, temperature, earth magnetic field, and sun activity. May 1941. In German. 2.00

1807-1818 PB L 73549 — Influence of the metastable exciting conditions on the normal current density and the normal cathode fall of the glow discharge in rare gases and rare gas mixtures. Apr 1941. In German. 1.50

1819-1862 PB L 73549 — Flavazol, a new heterocycle from sugars. Mar 1941. In German. 4.50

1863-1907 PB L 73549 — Relation of albumin assimilation (with additional feeding of carbohydrates) and water metabolism of suckling pigs. 1940. In German. 4.50

1908-1931 PB L 73549 — 6-Keto-9-dichloromethyl-hexahydronaphthalene and its reduction products. 1940. In German. 2.50

1932-1949 PB L 73549 — The possibility and economic utilization of compressed yeast waste liquors in agriculture. 1940. In German. 2.00

PB L 73549-S. ERLANGEN, GERMANY. UNIVERSITY. Doctors' dissertations in natural sciences. (FIAT Microfilm Reel I 259, Frames 1006-1949, abstract cards). 1938-1941. 41 p. Price: Microfilm-$1.00 - Photostat-$3.00
Brief abstracts of the individual items on the above reel, I 259, PB 73549, prepared by FIAT personnel in Germany.

PB L 73405. ERLANGEN, GERMANY. UNIVERSITY. Doctors' dissertations in natural sciences. (FIAT Microfilm Reel I 261, Frames 2989-3907) 1938-1940. 1018 f. Price: Microfilm-$6.00 - Enlargement Print-$102.00
This reel was prepared by FIAT investigators in Germany. 42 individual items are listed below and will be available as enlargement prints. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
2989-2998 PB L 73405	Analysis of organic medicines. By P. Tunmann. n.d. In German.	$1.50
2999-3009 PB L 73405	Contribution to the knowledge of the lubricating oil synthesis from some olefins developed in the Fischer-Tropsch-process. By Wilhelm Gilfert. 1940. In German.	1.50
3010-3021 PB L 73504	Vacuum tube noise at low frequency. By W. Greffunder. n. d. In German.	1.50
3022-3035 PB L 73405	The normal and abnormal radioactivity of human and animal tissues. By Adolf Krebs. 1939. In German.	1.50
3036-3059 PB L 73504	Contributions for clearing up the constitution of the alkaloids solatumine and solasonine. By H. Rochelmeyer. n. d. In German.	1.50
3060-3075 PB L 73405	Measurement of the number of condensation nuclei of various nuclear sources in space and their remaining in the upper respiratory passages. Waldtraut G. Bunde. 1940. In German.	1.50
3076-3087 PB L 73405	Generalization of the dodecahedral spaces. By Hans Friedge. 1939. In German.	1.50
3088-3099 PB L 73405	Intermediate phases occurring in the formation of nickel aluminate from nickel oxide and aluminum oxide in the solid state. By Karl Greb. 1940. In German.	1.50
3100-3110 PB L 73405	The lifetime of free electrons in fluorescent mercury vapor. By Richard Graebling. 1940. In German.	1.50
3111-3118 PB L 73405	Measurements on a resonance installation for generation of highest alternating voltages. By Georg Hauser. 1940. In German.	1.50
3119-3145 PB L 73405	Contribution to the knowledge of the formation of acetyl methyl-carbinol and 2,3-butylene glycol during fermentation. By Josef Kleber. 1939. In German.	3.00
3146-3160 PB L 73405	The photochemical reaction between bromine and chloral. By Herbert Klug. 1940. In German.	1.50
3161-3181 PB L 73405	The importance of cleavable sulfur compounds in the preparation of vegetables for preservation and their influence on packing materials. By J. Koch. 1940. In German.	2.00
3182-3193 PB L 73405	Arrangement for generation and investigation of hard gamma rays. By Heinz Lueg. 1940. In German.	1.50
3194-3219 PB L 73405	Camphene. By Werner Marten. 1939. In German.	3.00
3220-3236 PB L 73405	The determination of lactic acid in animal and plant substances. Contribution to the glycolysis in the animal organism. By Karl Mollenkopf. 1940. In German.	2.00
3237-3253 PB L 73405	Absorption measurements in electrically excited krypton according to the alternating light method. By Heinz Ommert. 1939. In German.	2.00
3254-3270 PB L 73405	The equilibria Fe plus CoO $\rightleftharpoons$ FeO plus Co, and Fe plus NiO $\rightleftharpoons$ FeO plus Ni in the melt, taking into consideration the oxygen content in the metal phase. By Paul Pickhart. 1939. In German.	3.00
3271-3283 PB L 73405	The reaction between monovinyl acetylene and chlorine, and monovinyl acetylene	

and bromine. By Kurt Rengert. 1939. In German. 1.50

3284-3319 PB L 73405 — Contribution to the knowledge and determination of the "anti-enzyme" of catgut. By Klaus Roulund. 1939. In German. 4.00

3320-3361 PB L 73405 — Contributions to the investigation of feature series of collective-like behavior. By Gerhard Schauffler. 1939. In German. 6.50

3362-3407 PB L 73405 — Micro determination of homeopathic mother tinctures. By Walter Schmid. 1939. In German. 3.00

3408-3431 PB L 73405 — Processes of bee life from the point of the physiology of development. By Ortwin Bendler. 1939. In German. 2.50

3432-3440 PB L 73405 — Measuring the conductivity and dielectric constant of biological substances in the 400 to 10 000 m band. By Reinhold Stachowiak. 1939. In German. 1.50

3441-3453 PB L 73405 — Influence of erythrosin and eosin on the reactivity of oat-and cucumis germs in comparison to growth hormone. By Günter Stahlberg. 1938. In German. 1.50

3454-3465 PB L 73405 — Investigations on the isomorphous substitution of the elements in alkali-alkaline earth phosphates. By Franz Steckereiter. 1940. In German. 1.50

3466-3494 PB L 73405 — Studies in the series of the hydroxy-and alkyloxy-oxindoles. By Mehmet Hasim Tulus. 1940. In German. 3.00

3495-3511 PB L 73405 — Polynuclear condensed systems with heterocyclic rings. By Mechtild Wagner-Roemmich. 1940. In German. 2.00

3512-3531 PB L 73405 — The influence of an electric field on the electron emission of the Li, Na, and K atoms. By Fritz Weller. n.d. In German. 2.00

3532-3549 PB L 73405 — Phosphate of cadmium and manganese. By Fritz Zureda. 1939. In German. 2.00

3550-3562 PB L 73405 — Gliding motions in atmospheric conditions from 11 to 13 May 1936, and the theory of circulation power. By Otto Geil. 1939. In German. 1.50

3563-3570 PB L 73405 — Fine recordings of the atmospheric pressure. By Carl Pfeiffer. 1939. In German. 1.50

3571-3624 PB L 73405 — Archeocyathacea. By Wilhelm Simon. 1939. In German. 5.50

3625-3651 PB L 73405 — The differential geometry of planes in n-dimensional Euclidean space. Adjuncted extreme planes. By Helmuth Gericke. 1940. In German. 3.00

3652-3679 PB L 73405 — The constitution of wood polyoses. By Elfriede Husemann. 1940. In German. 3.00

3680-3741 PB L 73405 — Diluvial geological investigations in the central Neckar valley. By Karl Albrecht Achilles. 1938. In German. 6.50

3742-3802 PB L 73405 — J.G. Kohl and his importance to German geological and national research. By Anneli Alexander. 1940. In German. 6.50

3803-3830 PB L 73405 — Cross breeding experiments in the species Streptocarpus Lindl. II. The hybrid vigor in streptocarpus hybrids. By Erich Bouttel. 1939. In German. 3.00

3831-3838 PB L 73405 — Synthesis of racemic lupinine. By Hans v. Cossel. 1939. In German. 1.50

3839-3851 PB L 73405 — The efficiency of light in carbon dioxide assimilation. By Hans-Joachim Richhoff. 1939. In German. 1.50

3852-3888 PB L 73405 — Determination of the molecular weight and the structure of rubber, guttapercha, and balata. By Kletus Fischer. 1938. In German. 4.00

3889-3907 PB L 73405 — Quantitative absorption measurements with benzene and benzene derivatives near the infra-red range. By Hans Kempter. n.d. In German. 2.00

PB L 73405-S. ERLANGEN, GERMANY. UNIVERSITY. Doctors' dissertations in natural sciences. (FIAT Microfilm Reel I 261, Frames 2989-3907, abstract cards) 1938-1940. 63 p. Price: Microfilm-$2.00 - Photostat-$6.00
Brief abstracts of the individual items on the above reel I 261, PB 73405, prepared by FIAT personnel in Germany.

PB L 73876. ERLANGEN, GERMANY. UNIVERSITY. Doctors' dissertations in natural sciences. (FIAT Microfilm Reel I 287, Frames 8344-9818). 1938-1941. 985 f.
Price: Microfilm-$8.00 - Enlargement print-$98.50
This reel was prepared by FIAT investigators in Germany. 32 individual items are listed below and will be available as enlargement prints. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
8344-8439 PB L 73876	Squirrel genera of the asiatic regions such as Hatufa, Funambulus, Lariscus, and Rhinosciutus. 1941. In German.	$10.00
8440-8487 PB L 73876	The inner processes in germination and the influence of exterior factors. 1940. In German.	5.00
8488-8517 PB L 73876	The production, polymerization and depolymerization of tetraphosphonitridotetrachlorotetrafluoride. 1940. In German.	3.00
8518-8541 PB L 73876	The influence of aliphatic ketones upon phenanthrenequinone. 1941. In German.	2.50
8542-8572 PB L 73876	A contribution to the knowledge of deeply colored cyclopentadienones. 1941. In German.	3.50
8573-8593 PB L 73876	Synthesis of aminochromindan. 1940. In German.	2.50
8594-8618 PB L 73876	The adsorption of nitrogen and argon by active carbon in the range of low and medium pressures. 1941. In German.	2.50
8619-8645 PB L 73876	Condensations of acenaphthene quinone with ketones. 1941. In German.	3.00
8646-8684 PB L 73876	The influence of iodine doses upon the cholesterol metabolism. 1940. In German.	4.00
8685-8692 PB L 73876	The influence of the specific pressure upon the absorption	

lines of water vapor bands. 1940. In German. 1.50

8693-8726 PB L 73876 — Transformations of silver perchlorate and dipyridine-silver-perchlorate with metal halides in non aqueous media. 1941. In German. 3.50

8727-8758 PB L 73876 — Autoxidation phenomena of anils of indandiones. 1940. In German. 3.50

8759-8795 PB L 73876 — Biuret reaction. 1940. In German. 4.00

8796-8810 PB L 73876 — The solubility of argon and krypton in water and heavy water. 1938. In German. 1.50

8811-8849 PB L 73876 — A contribution to the color problem of fluorite. 1941. In German. 4.00

8850-8874 PB L 73876 — Cremona geometry of three dimensions. 1941. In German. 2.50

8875-8905 PB L 73876 — Experiments concerning the chemical fight against Sitona lineata L. 1941. In German. 3.50

8906-8937 PB L 73876 — Phosphorus nitride compounds. 1940. In German. 3.50

8938-8960 PB L 73876 — Investigations on the intensity of the background appearing in quantitative spectral analysis of very pure aluminum. 1941. In German. 2.50

8961-8990 PB L 73876 — The influence of nitrogen fertilizers upon the development and yield of various intermediate winter fruits. 1941. In German. 3.00

8991-9021 PB L 73876 — Manuring in German highland-farming. n. d. In German. 3.50

9022-9068 PB L 73876 — Results from the record of "Reichsverband fur Zucht und Prufung deutschen Kaltbluts" (national association for breeding and testing German cold bloods). Feeding of cold-blooded working horses. 1941. In German. 5.00

9069-9084 PB L 73876 — Friability of the soil II. 1941. In German. 2.00

9085-9110 PB L 73876 — Anatomy and biology of Ergasilus minor Hallsch. 1941. In German. 3.00

9111-9125 PB L 73876 — The knowledge of the friability of the soil as a colloid chemical state of structure III. 1941. In German. 1.50

9126-9150 PB L 73876 — Investigations of rats from Breslau and their parasites. 1941. In German. 2.50

9151-9182 PB L 73876 — Influence of management and organization with regard to operational results. 1941. In German. 3.50

9183-9199 PB L 73876 — The growing point and leaf arrangement of some monocotyledemons water plants (Potamogeton crispus, Heteranthera dubia, typha angust, folia). 1941. In German. 2.00

9200-9222 PB L 73876 — The structure of the growing points of Honckenya peploides, silene maritima, Dianthus caryophyllus and Clematis paniculata. 1941. In German. 2.50

9223-9271 PB L 73876 — Experiences with water sprinkling on Silesian fields. 1941. In German. 5.00

9272-9318 PB L 73876 — Feeding of pregnant warm-blooded mares with a limited or with any quantity of green intermediate crops. 1941. In German. 5.00

PB L 73876-S. ERLANGEN, GERMANY. UNIVERSITY. Doctors' dissertations in natural sciences. (FIAT Microfilm Reel I 267, Frames 8544-9318, abstract cards). 1938-1941, 45 p. Price: Microfilm-$1.00 - Photostat-$3.00
Brief abstracts of the individual items on the above reel, I 267, PB L 73876, prepared by FIAT personnel in Germany.

PB L 73873. ERLANGEN, GERMANY. UNIVERSITY. Doctors' dissertations in natural sciences and economics. (FIAT Microfilm Reel I 269, Frames 404-1339) 1940-1941. 936 f. Price: Microfilm-$6.00 - Enlargement print-$94.00
This reel was prepared by FIAT investigators in Germany. 33 individual items are listed below and will be available as enlargement prints. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
404-492 PB L 73873	Production efficiency and marketing in the agriculture of Lower Saxony. (1928-1936). (General economic problems of Lower Saxony). In German.	$9.00
493-513 PB L 73873	Examination on color patterns and hues of blossoms. By Gerda Floren. 1941. In German.	2.50
514-520 PB L 73873	The dependence on temperature of the susceptibility of neodymium salts and the splitting up of terms caused thereby. By Herbert Fritsch. 1940. In German.	1.50
521-579 PB L 73873	Management and working results of systematic economic assistance in 6 RKTL-model farms in Lower Saxony, with special regard to human character influences. (General economic problems in Lower Saxony). In German.	6.00
580-597 PB L 73873	Copper-platinum alloys and their properties as catalysts. By Herbert Hildebrand. 1941. In German.	2.00
598-611 PB L 73873	Determination of velocity, damping and absorption of compression and shear waves in rubber. By Huang Si-Tang. 1940. In German.	1.50
612-671 PB L 73873	These frame numbers are missing.	
672-694 PB L 73873	The influence of the daily lighting period and the intensity of light on the development of some archegoniates. By August Wilhelm Kaufhold. 1940. In German.	2.50
695-759 PB L 73873	These frame numbers are missing.	
760-781 PB L 73873	Experiments on the numerical change of the natural bacterial flora in the digestive organs of ruminants. By Werner Koehler. 1940. In German.	2.50
782-795 PB L 73873	Investigations of minute pressure waves. By Kurt Koehne. 1941. In German.	1.50

Miscellaneous (contd)

786-817 PB L 73873 — Experiments on the antagonistic effect of magnesium toward boron and mercury in some mushrooms. By Werner Lehrmann. 1940. In German. 2.50

818-881 PB L 73873 — These frame numbers are missing.

882-898 PB L 73873 — The reaction of β-naphtol with dienes. By Johann Christian Salfeld. 1940. In German. 1.50

899-906 PB L 73873 — The quadratic Zeeman effect on the lines of europium sulfate. By Albert Schmiller. 1941. In German. 1.50

907-915 PB L 73873 — Relative distribution of energy in a continuous spectrum of sparks produced in fluids between 9,000 and 5,000 K. By Hedwig Schubert. 1941. In German. 1.50

916-941 PB L 73873 — Contribution to the knowledge on sliding discharges. By Marius Smits. 1941. In German. 3.00

942-955 PB L 73873 — The influence of the elasticity of the knife-edge and knife-edge support of a pendulum on its vibration period. By Herbert Tesch. 1940. In German. 1.50

956-961 PB L 73873 — Photochemistry of KH-KBr mixed crystals. By Hans Thomas. 1940. In German. 1.50

962-975 PB L 73873 — Mutation of Ptychopoda seriata Schrk. influencing the gonads. By Ernst Wagner. 1940. In German. 1.50

976-1032 PB L 73873 — These frame numbers are missing.

1033-1037 PB L 73873 — Synthesis of sounds by means of gear generators. By Karl-Heinz Kleine. 1941. In German. 1.50

1038-1068 PB L 73873 — Reaction kinetic examinations on hexa-substituted ethanes. By Friedrich Andreas. 1941. In German. 3.50

1069-1123 PB L 73873 — Economic studies on the improvement and organization of economic soil management in Germany. (General economic problems). In German. 5.50

1124-1161 PB L 73873 — Comparative examinations on the leaflike nature of sepals, petals and stamens. By Werner Kaussmann. 1941. In German. 4.00

1162-1178 PB L 73873 — The oxygen consumption of insects dependent on their size. By Annalies Kittel. 1941. In German. 2.00

1179-1209 PB L 73873 — Examinations on the pattern formation in the fleece of Karakul sheep. By Helmut Mergler. 1941. In German. 3.50

1210-1248 PB L 73873 — The consumption of nutrition agents by plants and the metabolism of the nutrition agents in the plants. By Alois Metzger. 1940. In German. 4.00

1249-1271 PB L 73873 — Examinations on the non-germination period of oats and barley. By Bernhard Moormann. 1940. In German. 2.50

1272-1296 PB L 73873 — Comparative examinations on the digestability of raw proteins in animal tests and in vitro. By Erich Noelle. 1941. In German. 2.50

1297-1316 PB L 73873 — Examinations on mildew of wheat. Erysiphe graminis tritici, with remark to growing of resistant plants. By Ilse Nover. n. d. In German. 2.00

1317-1326 PB L 73873 — The relationship between fat content and specific gravity and some physical properties of the calcium chloride serum of sheep's milk. By Nels Plettke. 1940. In German. 1.50

1327-1339 PB L 73873 — X-ray examination of supercooled ethyl alcohol. By Artur Prietzschk. 1941. In German. 1.50

PB L 73873-S. ERLANGEN, GERMANY. UNIVERSITY. Doctors' dissertations in natural sciences and economics. (FIAT Microfilm Reel I 269, Frames 404-1339, abstract cards) 1940-1941. 51 p. Price: Microfilm-$2.00 - Photostat-$4.00

Brief abstracts of the individual items on the above reel I 269, PB L 73873, prepared by FIAT personnel in Germany.

PB L 70476. ERLANGEN, GERMANY. UNIVERSITY. Doctors' dissertations in natural sciences. (FIAT Microfilm Reel I 272, Frames 3241-4142) 1934-1941. 901 f. Price: Microfilm-$6.00 - Enlargement Print-$90.50

This reel was prepared by FIAT investigators in Germany. 30 individual items are listed below and will be available as enlargement prints. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
3241-3262 PB L 70476	"Dragon's blood." By Wiltrud Klingel. Nov 1938. In German.	$2.50
3263-3280 PB L 70476	Separation of isotopes and mechanism of combustion in rising hydrogen-deuterium flames. By Walter Koelsch. n.d. In German.	2.00
3281-3305 PB L 70476	Contribution to the problem of plane, slow, viscous flow and the plane state of tension. By Josef Kröttner. Feb 4, 1941. In German.	2.50
3306-3313 PB L 70476	Investigations regarding the existence of the heavy metals, copper, lead and zinc in animal tissue and in food-stuffs with experiments on a suitable decomposition of organic substances in order to determine these metals. By August Loeschiller. Jul 1940. In German.	1.50
3314-3329 PB L 70476	Halogen-carrying effect of coal. By Friedrich Leber. Feb 1940. In German.	2.00
3330-3348 PB L 70476	Calculation of the rotation heat of methane in the limiting case of high temperatures. By Paul August Mann. 1939. In German.	2.00
3349-3424 PB L 70476	These frame numbers are missing.	
3425-3454 PB L 70476	Investigations on Kamala wood (Chlaro-phora excelsa) and on other lumber from overseas. By Hans Georg Moritz. 1941. In German.	3.00
3455-3470 PB L 70476	Experiments for preparing pure aliphatic tetra-substituted hydrazines. By Gerhard Neber. 1939. In German.	2.50
3471-3494 PB L 70476	Contribution to the knowledge of mannan and reaction of polyvaric carbohydrates toward high pressures at room temperature. By Herbert Otterbeck. 1940. In German.	2.50

3495-3499 PB L 70476 — Calorimetric investigations of the β-decomposition on the aluminum-zinc system. By Paul Günter Schröter. 1939. In German. 1.50

3500-3511 PB L 70476 — Pteria and pterobiline (Constituents of the pigment in the wings of pieridae). By Arnold Georg Tartter. 1940. In German. 1.50

3513-3553 PB L 70476 — The snakes of Eastern Africa in their habitat. By Wolfgang Utmöller. 1939. In German. 4.50

3554-3651 PB L 70476 — Geological investigations in the Ries Basin. The stratification in the area of the Wemding layer. By Emil Weber. 1934. In German. 10.00

3652-3696 PB L 70476 — Geological and sediment petrographic investigations in the Low Bavarian Tertiary (Layer at Pfarrkirchen). By Hans K. Zeebelein. 1939. In German. 4.50

3697-3701 PB L 70476 — Experiments for preparing a Δ 5,7-choladienic acid. By Hertha Wulle. May 1938. In German. 1.50

3702-3711 PB L 70476 — Decomposition of the thymonucleic acid by pancreas-polynucleotidases. By Ilse Büttiger. 1941. In German. 1.50

3712-3784 PB L 70476 — These frame numbers are missing.

3785-3796 PB L 70476 — Effect of thrombin and fibrinolysis in purified coagulation systems. By Sylvia Rudemann. 1940. In German. 1.50

3797-3812 PB L 70476 — Synthesis of α-pyridyl and of α-quinolyl carbinolene. By Ernst Pirot. 1940. In German. 2.00

3813-3850 PB L 70476 — Problems concerning a proper system of measuring ship spaces. By Kurt Reiter. 1941. In German. 4.00

3851-3858 PB L 70476 — Elastic and plastic deformations on an electrically butt-welded seam with simultaneous measurements of the field of temperature. By Erich Sudasch. 1940. In German. 1.50

3859-3869 PB L 70476 — Investigation of turbulent mixing processes. By Karl Victoria. 1941. In German. 1.50

3870-4004 PB L 70476 — Physical and mathematical testing of the strength properties of paper with the help of new testing instruments. By Finn Eliksted. 1939. In German. 13.50

4005-4058 PB L 70476 — Data on the examination of papers with regard to their behavior against ink. By Erhart Liebert. 1941. In German. 5.50

4059-4080 PB L 70476 — Determination of the distribution of tensile strain and pressure upon the ground on concrete road slabs by optical tension measurement. By Raluseh Raluscheff. Jan 27, 1941. In German. 2.50

4081-4086 PB L 70476 — Data on the problem of adjusting the blower-fed engine. By Robert Eberan v. Eberhorst. Jun 1, 1940. In German. 1.50

4087-4104 PB L 70476 — Temperatures in the molds and in the press during briquetting. By Hellmuth Auerbach. Jul 30, 1937. In German. 2.00

4105-4127 PB L 70476 — 3 contributions to aerodynamics and the calculation of the stability of rotating-wing systems in constructional engineering and in air-plane construction. By Alf Pflueger. Mar 13, 1941. In German. 3.50

4128-4142 PB L 70476 — Data on the surface tension of glasses. By Alfred Albrecht. 1941. In German. 1.50

PB L 70476-S. ERLANGEN, GERMANY. UNIVERSITY. Doctors' dissertations in natural sciences. (FIAT Microfilm Reel I 272, Frames 3241-4142, abstract cards) 1934-1941. 37 p. Price: Microfilm-$1.00 - Photostat-$3.00
Brief abstracts of individual items on the above reel I 272, PB 70476, prepared by FIAT personnel in Germany.

PB L 74477. ERLANGEN, GERMANY. UNIVERSITY. Doctors' dissertations in natural sciences. (FIAT Microfilm Reel I-273, Frames 4185-5076) 1939-1941. 892 P. Price: Microfilm-$6.00 - Enlargement print-$[illegible]
This reel was prepared by FIAT investigators in Germany. 34 individual items are listed below and will be available as enlargement prints. The entire reel may be purchased as a microfilm for $6.00. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
4185-4196 PB L 74477	Space-acoustic changeability. By Karl Fred Darmer. In German.	$1.50
4197-4216 PB L 74477	The transformation of surge-waves by means of longitudinal inductances. By Hermann Lau. In German.	2.00
4217-4225 PB L 74477	Investigating the starting of vibration at overflowing drums. By Kurt Petrikat. In German.	1.50
4226-4256 PB L 74477	Calculation of statics. By Karl Schröder. In German.	3.50
4257-4265 PB L 74477	Self-ignition of hydrocarbon-airmixtures and the knocking in Otto motors. By Hermann Teichmann. In German.	1.50
4266-4275 PB L 74477	Maximum factor measuring bridge for high voltage. By Heinrich Warnecke. In German.	1.50
4276-4288 PB L 74477	Auto diffusion of hydrogen chloride and hydrogen bromide. By F. Zehle. In German.	1.50
4289-4294 PB L 74477	Contribution to the thermal behavior of n-Hexane in the presence of catalysts. By Gustav Choulat. In German.	1.50
4295-4312 PB L 74477	Electric stability of compressed gases. By Berthold Unger. In German.	2.00
4313-4320 PB L 74477	Characteristic frequency curves of rotary vibration systems with centrifugal pendula. By Helmut Kammerer. In German.	1.50
4321-4326 PB L 74477	Magnetic measurements in the ternary system Aluminum-Chromium-Copper. By Adolf Knappwost. In German.	1.50
4327-4336 PB L 74477	The subjective effect of timbre variations. By Emil Lob. In German.	1.50
4337-4341 PB L 74477	The significance of the yield point for the fatigue stress of steels of high strength. By Rudolf Cettel. In German.	1.50

4342-4350 PB L 74477 **The synthesis of benzene hydrocarbons from methane.** By Paul Schenk. In German. 1.50

4351-4370 PB L 74477 **The applicability of capillary condensation in adsorption cooling machines.** By Ernst Sprengel. In German. 2.00

4371-4415 PB L 74477 **Effect of citification on the biological structure of a nation.** By Kurt Hensel. In German. 4.50

4416-4432 PB L 74477 **Knowledge of Burton's rule for positive hydrosols.** By Hellmut Kauffmann. In German. 3.50

4433-4444 PB L 74477 **Behavior of the penetrating component in cosmic radiation.** By Detlof Lyons. In German. 1.50

4445-4460 PB L 74477 **Knowledge of "Lignin".** By Heins Peter. In German. 2.00

4461-4565 PB L 74477 **Practical management of electrical power plants.** By Hermann Berthold. In German. 10.50

4564-4572 PB L 74477 **Echo measuring on long distance transmission with regard to zenith reflections.** By Rudolf Ertrig. In German. 1.50

4573-4636 PB L 74477 **Relations between constitution and color of monomethine cyanine dyes.** By Werner Franz. In German. 6.50

4637-4651 PB L 74477 **Theory of polyphase transformers with practical example.** By Ferdinand Fraumberger. In German. 1.50

4652-4657 PB L 74477 **Relation between the light of the sky at night and the ionosphere.** By Richard Hechtel. In German. 1.50

4658-4670 PB L 74477 **Water circulation and operational safety of forced rotating boilers.** By Hans Maas. In German. 1.50

4671-4727 PB L 74477 **Acetyl-rhodineg (7) and vinylporphyrin.** By Arthur Oesterreicher. In German. 6.00

4728-4765 PB L 74477 **Agriculture and industry in the "Mittleren Schwabischen Alb."** By Ernst Rudt. In German. 4.00

4766-4816 PB L 74477 **Polyphase induction motor with squirrel-cage.** By Richard Schiz. In German. 5.50

4817-4854 PB L 74477 **Development of a new casting process for the manufacture of perfect steel ingots.** By Per. F. Erichsen. In German. 4.00

4855-4867 PB L 74477 **New viewpoints and methods for combating water seepage as well as for preserving a minimum flow for water lines in pit coal mining of the "Rheinisch-Westfälisch" region.** By Eberhard Linsel. In German. 1.50

4868-4938 PB L 74477 **The "St. Georg" church in Cologne. Construction investigation.** By Wilhelm Scharn. In German. 7.50

4939-4979 PB L 74477 **Test for comparing "Siegerländer" preparation processes.** By Günter Schröder. In German. 4.50

4980-4993 PB L 74477 **Investigation on the influence of grain size, rate of flow through the sieve and mixture ratio of pit coal with regard to the degree of combustion in modern furnace systems as a contribution for solving the problem of sorting.** By Reinhard Schulze. In German. 1.50

4994-5076 PB L 74477 **Mechanical flax harvesting.** By Karl Woitschach. In German. 8.50

PB L 73611. ERLANGEN, GERMANY. UNIVERSITY. **Doctors dissertations in natural sciences.** (FIAT Microfilm Reel I 279, Frames 1151-2090 (641 frames missing on reel)) 1938-1940. 298 f. Price: Microfilm-$3.75 - Enlargement print-$30.00

This reel was prepared by FIAT investigators in Germany. Individual items are listed below and will be available as enlargement prints. Please include PB and frame numbers when ordering individual items.

Frames	Title	Price
1151-1195 PB L 73611	**The influence of trace elements and growth substances on the growth of aspergillus niger.** Jun 30, 1939. In German.	$4.50
1196-1211 PB L 73611	**Conversion of porphyrins into "dihydroxychlorins" by action of osmium tetraoxide.** (This item may be incomplete.) Feb 29, 1940. In German.	2.00
1212-1280 PB L 73611	These frames are missing.	
1281-1302 PB L 73611	**The influences on a mercury vacuum arc with a controlling grid in the plasma.** 1939. In German.	2.50
1303-1347 PB L 73611	These frames are missing.	
1348-1364 PB L 73611	**Investigations on the influence of boron on plants, algae and bacteria.** 1939. In German.	2.00
1365-1569 PB L 73611	These frames are missing.	
1570-1583 PB L 73611	**Stercobilin.** Mar 28, 1939. In German.	1.50
1584-1692 PB L 73611	These frames are missing.	
1693-1736 PB L 73611	**Investigations on the stability of the thin-walled spherical shell, at a pressure which is equal on all sides and increases with depth, within the plastic tension range.** 1939. In German.	4.50
1737-1752 PB L 73611	**Nitric oxide compounds of nickel (I) and iron (I) halides.** Jan 10, 1940. In German.	2.00
1753-1794 PB L 73611	**The practical computation of the grid controlled rectifier with "zero anode."** 1938. In German.	4.50
1795-2008 PB L 73611	These frames are missing.	
2009-2056 PB L 73611	**Possibilities to determine important fertility factors of soils by means of the azotobacter method.** Feb 7, 1940. In German.	5.00
2057-2090 PB L 73611	**Experimental investigations of potash leaching losses from the soil and their control.** Oct 31, 1939. In German.	3.50

PB L 73611-S. ERLANGEN, GERMANY. UNIVERSITY. **Doctors' dissertations in natural sciences.** (FIAT Microfilm Reel I 279, Frames 1151-2090, abstract cards) 1938-1940. 24 p. Price: Microfilm-$1.00 - Photostat-$2.00

Brief abstracts of the individual items on the above reel I-279, PB 73611, prepared by FIAT personnel in Germany.

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PB L 80693. BAUER, G. Turbine failures, popular lectures by professor Dr G. Bauer. Part 2. (American Translation Service Rept 5) n. d. 62 p., mimeo. Washington, D. C., U. S. Department of Commerce, Office of Technical Services. Price: $2.50

PB L 80745. BOULWARE, J. H. and others. Pyrethrum in Japan. (SCAP Natural Resources Sect. Rept 78) May 1947. 28 p., mimeo. Washington, D. C., U. S. Department of Commerce, Office of Technical Services. Price: $1.25

PB L 80821. BLACK, SIMON and others. The oxidation of acetate by yeast in the presence of fluoroacetate. n. d. 27 p., mimeo. Washington, D. C., U. S. Department of Commerce, Office of Technical Services. Price: $1.25

PB L 78279. BRICE, ARTHUR T. The phase principle in microscopy. (FIAT Final Rept 1059) Mar 1947. 47 p., mimeo. Washington, D. C., U. S. Department of Commerce, Office of Technical Services. Price: $1.50

PB L 77290. FOWLER, ROBERT D. and BURFORD, WILLIAM B., III. Fluorocarbons to June 30, 1943. (OSRD Rept 3898) Jul 1944. 147 p., mimeo. Washington, D. C., U. S. Department of Commerce, Office of Technical Services. Price: $5.00
For abstract, see this Bibliography, v. 5, p. 944.

PB L 80685. HABANN and others. Report No. 1: On electrochemical sources of energy - meeting of October 27, 1943, etc. (CONLAB 26) n. d. 67 p., mimeo. Washington, D. C., U. S. Department of Commerce, Office of Technical Services. Price: $3.50

PB L 79509. HOWER, LAWRENCE D., JR. and others. Refractory insulating coatings for metal. Interim report No. 2, Feb 1 - Mar 1, 1947. (Rutgers Univ N. J. Ceramic Res Station Rept 3) Mar 1947. 5 p., mimeo. Washington, D. C., U. S. Department of Commerce, Office of Technical Services. Price: 25¢

PB L 79505. MONTGOMERY, EARLE T. Ceramic materials for application in the design of jet propelled devices. Quarterly report, Aug - Oct, 1946. (Ohio State Univ Res Foundation Rept 18A) Dec 1946. 5 p., mimeo. Washington, D. C., U. S. Department of Commerce, Office of Technical Services. Price: 25¢

PB L 80757. OHLINGER. The development of the new styrene catalyst. (Translation of a German report) (Reconstruction Finance Corp. Office of Rubber Reserve Tech Rept BR-302) Sep 1945. 13 p., mimeo. Washington, D. C., U. S. Department of Commerce, Office of Technical Services. Price: 50¢

PB L 80823. RODEBUSH, C. ERNST and others. Volatility and vapor pressure of nine organic arsines. n. d. 11 p., mimeo. Washington, D. C., U. S. Department of Commerce, Office of Technical Services. Price: 50¢

PB L 80744. SUPREME COMMANDER FOR THE ALLIED POWERS. NATURAL RESOURCES SECTION. Low-temperature carbonization of coal in Japan. (Rept 74) Apr 1947. 85 p., mimeo. Washington, D. C., U. S. Department of Commerce, Office of Technical Services. Price: $3.50

PB L 79506. UELTZ, H. F. B. Refractory insulating coatings for metal. Interim report No. 1, Jan 1 - Feb 1, 1947. (Rutgers Univ N. J. Ceramic Res Station Rept 2) Feb 1947. 3 p., mimeo. Washington, D. C., U. S. Department of Commerce, Office of Technical Services. Price: 25¢

PB L 81823. U. S. QUARTERMASTER CORPS. Treatment of Army socks for shrink resistance by the Quartermaster Corps. (Textile Series Rept 46) Aug 1947. 62 p., mimeo. Washington, D. C., U. S. Department of Commerce, Office of Technical Services. Price: $1.50

PB L 177-S-3. WAGNER. NH_3 recovery from the blue water of the rayon and cuprama plants in Dormagen. (Appendix S, Supplement to PB 177) Translation in English. (CIOS File XIL-5, Item 22, Supp.) May 1944. 10 p., mimeo. Washington, D. C., U. S. Department of Commerce, Office of Technical Services. Price: 50¢

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